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**National Highway
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Washington, D.C. 20590

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ACCIDENT RESEARCH GROUP

Division of Arvin/Calspan
[REDACTED]

CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 92-12
VEHICLE - POLICE 1991 FORD LTD CROWN VICTORIA
LOCATION - [REDACTED] CA
ACCIDENT DATE - [REDACTED] 1992

Contract No. DTNH22-87-C-27169

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
Washington, D.C. 20590

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points are coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicles(s) or their safety systems.

TECHNICAL REPORT STANDARD TITLE PAGE

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15. Supplementary Notes On-site investigation of a single vehicle roadside departure crash that involved a police 1991 Ford LTD Crown Victoria. The driver sustained a minor (AIS-1) burn of the left fingers from contact with the inflation module.			
16. Abstract This on-site investigation focused on a single vehicle roadside departure crash that occurred on [REDACTED], 1992. The Accident Research Group was notified of the crash on [REDACTED] and initiated an on-site investigation on [REDACTED]. A marked police 1991 Ford LTD Crown Victoria was in pursuit of a speeding vehicle and was traveling on a rural two lane mountainous road at a police reconstructed speed of 119.1 KPH (74 mph). The vehicle drifted onto the right shoulder and broke traction as it exited a moderate left curve. The right rear quarter panel area of the vehicle impacted a delineator post located at the outboard edge of the shoulder. The Crown Victoria subsequently rotated approximately 80° in counterclockwise direction across the travel lanes before departing the left side of the roadway. The vehicle became airborne as it exited the shoulder area of the roadway as it traveled down a 45° earth embankment. The right side passenger compartment area impacted several trees which resulted in severe vehicle damage. As a result of the impacts, the vehicle's supplemental driver air bag system deployed. The driver of the vehicle was a 54 year old male, 179.1 cm (70.5") and 99 kg (220 lbs.). He was properly restrained by the active 3-point lap and shoulder belt system. In response to the lateral impact forces, the driver's upper torso slid out of the manual shoulder belt and impacted the intruding right upper B-pillar, roof, and roof side rail. As a result, he sustained multiple right rib fractures with flail chest and hemothorax (AIS-4), multiple fractures of the right upper extremity (AIS-3), and a closed head injury with brief loss of consciousness (AIS-2). He rebounded across the interior of the vehicle and came to rest with his left hand pressed against the deflated air bag and the inflation module. The heat retained in the inflator assembly melted the air bag and produced full thickness burns (AIS-1) of the driver's dorsal left middle, ring, and fifth fingers.			
17. Key Words Roadside departure crash Right side impacts Air bag deployment Inflator temperatures of 300°C (578°F) Thermal burns of driver's left hand, AIS-1		18. Distribution Statement General Public	
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CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 92-12
VEHICLE - POLICE 1991 FORD CROWN VICTORIA 4 DR. SEDAN
LOCATION - [REDACTED] CA

SUMMARY

The single vehicle roadside departure crash occurred on a rural two-lane mountainous road on [REDACTED], 1992 during daylight hours. The involved vehicle was a marked police 1991 Ford Crown Victoria, 4 door sedan (V.I.N.: [REDACTED]), that was equipped with a supplemental driver's air bag system. The crash occurred as the vehicle was exiting a moderate left curve with a downgrade of 5.2%. The dry asphalt road surface was 6.6m (21'9") wide and was bordered by narrow paved and loose cinder shoulders. A steep downhill embankment of 45° paralleled the left (south) edge of the roadway. The posted speed limit was 88 kph (55 mph).

The driver of the Ford Crown Victoria was on routine patrol and was traveling in an easterly direction on the state highway. He entered the parking lot of a local service station and noted a westbound vehicle traveling at a high rate of speed. The officer initiated a U-turn and activated the vehicle's emergency equipment (flashing lights and siren) and pursued the speeding westbound vehicle. During the pursuit, the driver of the Crown Victoria entered a moderate left curve at a high rate of speed. The vehicle drifted wide onto the right (north) shoulder and broke traction as the driver exited the curve. The right rear quarter panel impacted a delineator post as the vehicle initiated a counterclockwise yaw. The Crown Victoria subsequently deposited four-wheel centrifugal tire marks on the road surface as it crossed both travel lanes. The [REDACTED] Highway Patrol computed an initial speed of 119.1 kph (74 mph) for the vehicle as it exited the curve using the critical curve formula.

As the vehicle crossed the eastbound travel lane and departed the left edge of the roadway, it had rotated approximately 80° in a counterclockwise direction. The police documented 82.3m (270') of centrifugal tire marks prior to road departure. During Calspan's on-site investigation that occurred nearly three months later, 42.7m (140') of tire marks were still visible on the asphalt road surface. As the vehicle departed the left (south) edge of the roadway, the right front fender area impacted and dislodged a steel delineator post from the cinder and earth shoulder. The vehicle exited the shoulder area in a near broadside orientation and became airborne as it traveled over the earth embankment. The frontal area of the Crown Victoria contacted branches of a large tree that was located on the embankment 7.62m (25') outboard of the road edge. The vehicle continued in a near broadside orientation and pitched

slightly to its right. The upper surface of the right front fender area of the vehicle impacted a 20.3cm (8") cedar tree that was located 9.1m (30') outboard of the roadedge. The 3 o'clock direction of force impact fractured the tree 81.3cm (32") above the ground and deflected the stump along the vehicle's path of travel. The right passenger compartment and roof side rail area of the vehicle subsequently impacted a 25.4cm (10") diameter cedar tree that was located 2.4m (8") east of the 20.3cm (8") diameter tree and 8.7m (28'6") south of the roadedge. At impact the vehicle was pitched approximately 15-20° to its right which resulted in a non-horizontal impact force. The impact crushed the side structure of the vehicle 69.1cm (27.2") at the beltline and 83.8cm (33") at the right roof side rail. Again, the larger diameter tree fractured 1.9m (6'3") above the ground and the remaining stump was deflected to the ground as the vehicle overrode the struck tree.

The Ford Crown Victoria rotated approximately 30-40° in a clockwise direction following the latter impact sequence with the 25.4cm (10") tree. The vehicle came to rest facing in a downhill orientation approximately 6.1m (20') west of the 25.4cm (10") 6.1m (20') diameter tree. During the crash sequence, the supplemental driver's air bag system deployed.

The driver of the vehicle was a 54-year-old male with a stated height of 179.1cm (70.5") and weight of 99 kg (220 lbs.). He was properly wearing the active 3-point lap and shoulder belt system. Belt usage was supported by driver statements, blood stains on the upper shoulder belt webbing and by load induced abrasions to the inner plastic surface of the system's latchplate. There was no loading evidence on the belt webbing or damage to the active restraint system. The driver stated that he routinely drove the Crown Victoria with the seat adjusted to a mid-track position and the seatback set to the most upright position. He stated that the tilt steering column was probably adjusted to the center position.

At impact with the trees, the driver was probably out of position to his right due to the pre-crash rotation of the vehicle and was further displaced at each tree impact. As the vehicle impacted the 25.4cm (10") diameter tree, the driver moved laterally to his right as his upper torso slid out of the manual shoulder belt webbing, while his pelvic area loaded the lap belt portion of the 3-point belt system. His head impacted the intruding headliner and roof 36.8-50.8cm (14.5-20") rearward of the right A-pillar and 27.9cm (11") above the side rail. The 11.4cm (4.5") diameter head contact cracked the backer to the headliner and bowed the roof panel approximately 0.6cm (0.25") outward. As a result of the contact, the driver sustained a laceration to the top of the scalp (AIS-1), a closed head injury with brief loss of consciousness and residual cognitive deficits (AIS-2), a non-displaced fracture of the right zygoma (AIS-2), a nasal laceration (AIS-1), a displaced nasal fracture (AIS-2), and four dislocated

immediately forward of the right B-pillar. The contact resulted in a fracture of his right clavicle (AIS-2). His right forearm impacted the right roof side rail 20.3-29.2cm (8-11.5") rearward of the right upper A-pillar. The contact was evidenced by tissue transfers on the headliner fabric that covered the side rail area. As a result of the side rail contact, the driver sustained a comminuted fracture of the right radial head (AIS-3) and a fracture of the right proximal ulna (AIS-2).

During the driver's lateral trajectory, his right chest area probably contacted the right upper B-pillar as the vehicle crushed to maximum engagement. Although no contact evidence was visible to the plastic jacket covering the B-pillar, the driver sustained fractures of the right ribs 2-9 with flail chest and right hemothorax (AIS-4) and a right pulmonary contusion (AIS-3).

The driver subsequently rebounded across the interior of the vehicle into the left front seatback and/or the left front door panel. He sustained a fracture of the spinous process of T₁₂ from the probable rebound contact. The supplemental driver's air bag system deployed during the crash sequence; however, due to the driver's lateral trajectories, he had minimal involvement with the bag. He came to rest with his left hand under the upper module cover flap, pressing against the deployed air bag and the inflation module. The hot inflation module melted the face of the air bag and an internal tether strap of the bag at the 10 o'clock position. The heat was transmitted through the bag which resulted in full thickness thermal burns of the dorsal aspects of the driver's left middle, ring, and fifth fingers (AIS-1). The thermal burns destroyed the tendons of the fingers and required extensive skin grafts. The driver came to rest slumped forward over the steering assembly and bled profusely from the nasal injuries onto the deflated air bag. He was transported by helicopter to a trauma center where he was admitted for 24 days for treatment of his injuries. Currently he has no ability to move the left ring and fifth fingers due to the extensive burn injury.

During our on-site investigation of this crash, a representative from TRW (manufacturer of the air bag module) was present to inspect and dismantle the module assembly. During his discussion of the deployment process, he stated that the air bag material, which consists of woven nylon with a neoprene liner, will not support a flame; however, it does have a melting point of 154-177° C. (310-350° F.). The inflation module, which is primarily stainless steel, reaches deployment temperatures of 300° C. (578° F.) and cools slowly due to its isolated, non-vented location.

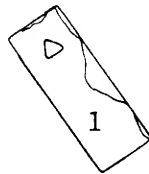
The melted area of the air bag was located 19.1-26cm (7.5-10.25") left of center and 8.3-9.5cm (3.25-3.75") above the horizontal centerline. The 1.3 x 7.0cm (0.5 x 2.75") melted area of the air bag was located 4.4-10.2cm (1.75-4.0") inboard of the

horizontal centerline. The 1.3 x 7.0cm (0.5 x 2.75") melted area of the air bag was located 4.4-10.2cm (1.75-4.0") inboard of the peripheral seam. Tissue and blood were visible within the melted area. The face of the inflator contained melted fragments of the bag and an internal tether strap that were pressed against the inflator by the driver's hand.

An external inspection of the inflator assembly did not yield evidence of filtering screen burnthrough or separation of the initiator assembly. The assembly was intact and appeared to have performed as designed. Due to the nature of the driver's burn injury and the melting of the bag, it was decided that disassembly of the inflator was not necessary. The module assembly was identified by the following alpha/numerical sequences: [REDACTED] AND [REDACTED].

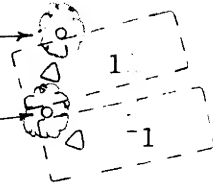
Accident Schematic
Calspan Case No.92-12

Fractured Tree

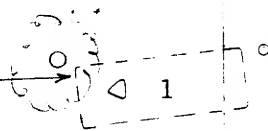


10" Diameter
Struck Tree

8" Diameter
Struck Tree



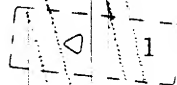
Struck Tree
Branches



-45°
Embankment



Area of Struck Delineator



Paved Shoulder

Cinder Shoulder

Vehicle

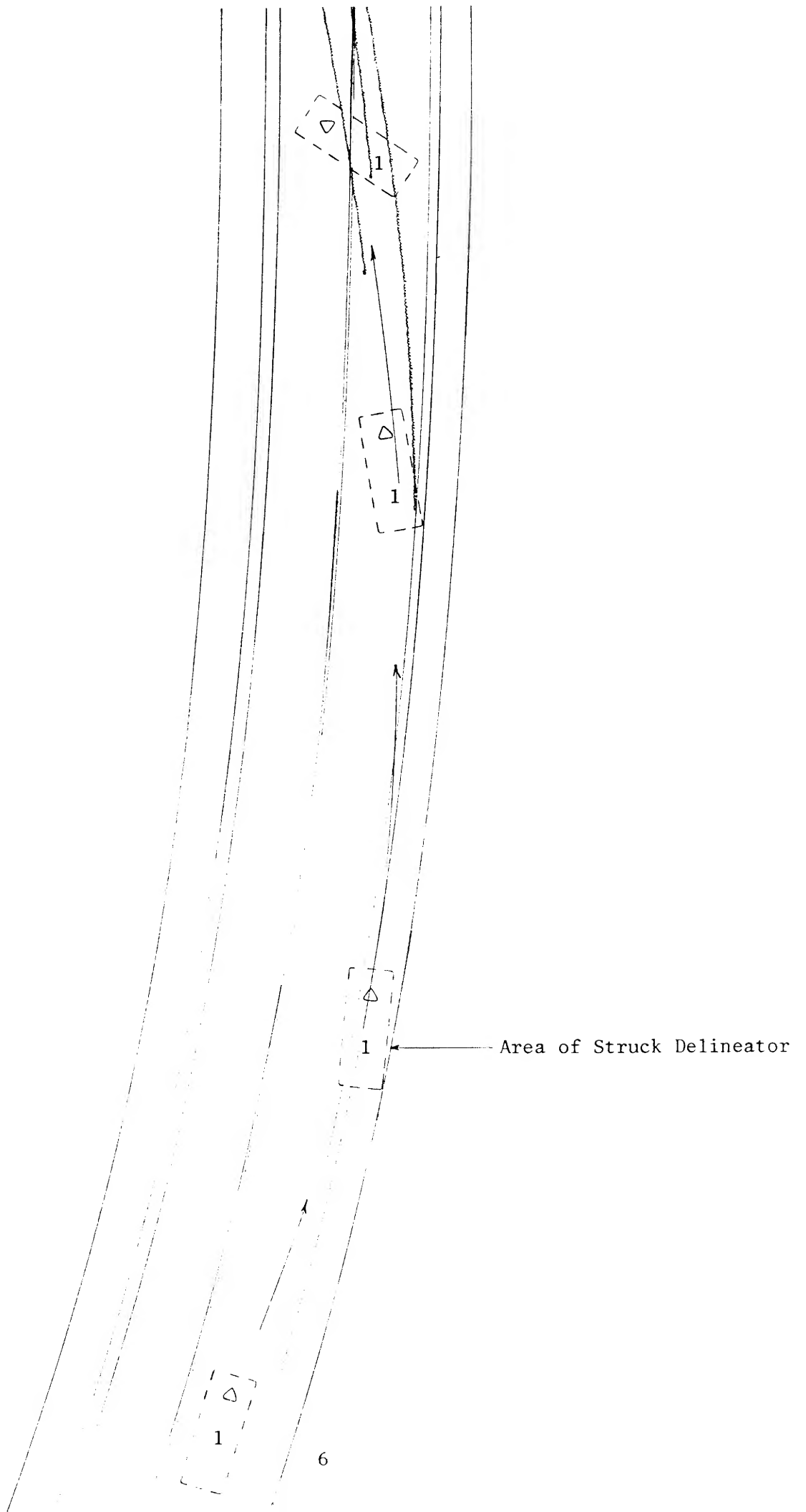
#1 - 1991 Ford LTD Crown
Victoria Police Vehicle

Paved Shoulder

Cinder Shoulder

-5.2%





CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 92-12
VEHICLE - POLICE 1991 FORD CROWN VICTORIA
LOCATION - [REDACTED] CA

ACCIDENT DATA

Location: Rural, two lane state route
City/Township: [REDACTED], CA
Area/Type: Rural/Mountainous
Accident Date/Time: [REDACTED], 1992,
daylight hours
Investigating Police Agency: [REDACTED] Highway Patrol
Accident Type: Single vehicle roadside
departure, multiple tree
impacts
Air Bag Vehicle Driver
Injury Severity: Severe (AIS-4)

AMBIENCE

Viewing Conditions: Daylight
Weather: Clear
Precipitation: None
Road Surface: Dry

HIGHWAY

Type: State route
Number of Lanes: 2
Width: 21' 9"
Surface: Asphalt
Median: None

Edge:	North edge - 1.8cm (6') paved and loose cinder shoulder South edge - 2.5m (8'4") paved and loose cinder shoulder
Vertical Alignment:	5.2% grade, negative to the west
Horizontal Alignment:	Left curve
Traffic Density:	Light

TRAFFIC CONTROLS

Signals:	None
Signs:	No pertinent signs
Markings:	Yellow full barrier centerlines, solid white edgelines
Speed Limit:	88 KPH (55 mph)

VEHICLE

Description:	1991 Ford Crown Victoria, 4 dr. sedan, marked police vehicle
V.I.N.:	2FACP72G5MX (production number deleted)
Color:	Black and white
Odometer:	26,919 miles
Engine:	8 cylinder, 5.8 L
Transmission:	4-speed automatic overdrive, column mounted transmission selector lever
Steering:	Power
Brakes:	Power front disc

Padding:	Upper, mid, and lower instrument panel, knee bolster, soft edged steering wheel rim and air bag module cover, sunvisors, adjustable head restraints, fold-down center armrest, door panels, door armrests, headliner
Active Restraints:	3-point lap and shoulder belts in the four outboard seated positions, center front and center rear lap belts
Automatic Restraints:	Supplemental driver's air bag system that deployed during the crash sequence
Defects:	None
Tow Status:	Towed due to damage

VEHICLE DAMAGE

Exterior:

The exterior of the 1991 Ford Crown Victoria sustained severe damage from multiple impacts with roadside and off-road objects. As the vehicle exited a left curve, it drifted onto the right shoulder and impacted a delineator with the right rear quarter panel area. The impact produced 12.7cm (5") of crush to the panel that was located 86.4cm (34") rearward of the right rear axle. The deformation to the quarter panel began 15.3cm (6") rearward of the referenced axle and extended 111.8cm (44") to the rear bumper. The vehicle rotated across the travel lanes in a counterclockwise direction and departed the left roadedge in a near broadside orientation. As the vehicle departed the roadway, the right front fender area impacted and dislodged a steel delineator post from the cinder and earth shoulder. Paint abrasions were noted to the fender 20-48cm (8-19") rearward of the right front axle position and were vertically orientated on the fender above the wheel opening. Crush damage to the area was masked by subsequent impacts.

Exterior
(Cont'd):

The vehicle exited the left shoulder of the roadway and traveled down an earth embankment, becoming airborne in a broadside yaw. The frontal area of the vehicle contacted overhanging branches of a large tree that was located 7.6m (25') outboard of the roadedge. The branches probably fractured the header panel and scratched the top surface of the vehicle's hood.

As the vehicle continued on its trajectory down the embankment, the front undercarriage area of the Crown Victoria impacted the ground which displaced the frontal structure upward. Push bars were mounted to the front bumper and frame area of the vehicle. As a result of the undercarriage impact and subsequent contact with small diameter trees on the embankment, the right side of the front bumper face was dented 40-52cm (16-20.5") right of center, to a depth of 1.9cm (.75"). The lower right push bar bracket was deformed and displaced 12.7cm (5") laterally to the left. The bumper energy absorbing devices were compressed 3.2cm (1.25") on the right side and 1.6cm (.6") on the left side.

Due to the slope of the embankment, the broadside trajectory of the vehicle, and vehicle contact with the ground, the Crown Victoria began to pitch to its right. The upper surface of the right front fender impacted a 20.3cm (8") diameter cedar tree that was located 9.1m (30') outboard of the roadedge. The tree impact damage began on the fender at bumper level and extended vertically onto the top of the fender and hood, indicating a non-horizontal (00-LFMN-3)) impact force. Direct contact damage began 40.6cm (16") forward of the axle position and extended 20.3cm (8") forward to the leading edge of the fender. The vehicle subsequently impacted a small diameter tree with the right front fender area. The damage was located 16.5-30.5cm (6.5-12") forward of the referenced axle position and involved 7.6cm (3") of crush on the lip of the wheel opening. The

Exterior
(Cont'd):

impacts fractured the 20.3cm (8") diameter tree 81.3cm (32") above ground level and displaced the stump to the east as the vehicle overrode the remaining trunk of the tree. The small diameter tree was completely uprooted and displaced from its location on the embankment.

The Crown Victoria continued to pitch to its right and subsequently impacted a 25.4cm (10") diameter cedar tree that was located 2.4m (8') east of the previously struck 8" diameter tree. The impact damage extended vertically from the sill of the vehicle onto the side rail and roof. Due to the slope of the embankment and the vehicle's attitude at impact, the damage was diagonally orientated on the right passenger compartment area. Direct contact damage on the right front door and sill area began 111.8cm (44") rearward of the right front axle and extended 35.6cm (14") rearward. The direct contact damage on the right roof side rail began 162.6cm (64") rearward of the axle position and extended 33cm (13") rearward. Maximum crush was 83.8cm (33") located on the right roof side rail at the B-pillar. Crush values at the side rail level were as follows:

$C_1 = 39.4\text{cm (15.5")}$, $C_2 = 78.1\text{cm (30.75")}$, $C_3 = 83.8\text{cm (33")}$, and $C_4 = 33.3\text{cm (13.1")}$ at the right A-pillar. A second set of crush values were documented at the beltline area of the vehicle which extended from the A- to the C-pillars and were as follows:

$C_1 = 20.3\text{cm (8")}$, $C_2 = 48.5\text{cm (19.1")}$, $C_3 = 76.7\text{cm (30.2")}$, $C_4 = 50.8\text{cm (20")}$, $C_5 = 20.5\text{cm (8.1")}$, $C_6 = 10.2\text{cm (4")}$. Maximum crush at the beltline was 76.7cm (30.2") located at the B-pillar. The crush profile of the right sill area was also documented and was as follows:

$C_1 = 0\text{cm}$, $C_2 = 26.9\text{cm (10.6")}$, $C_3 = 38.1\text{cm (15")}$, $C_4 = 50.8\text{cm (20")}$, $C_5 = 54\text{cm (21.25")}$, $C_6 = 19.1\text{cm (7.5")}$.

As a result of the multiple impacts, all exterior sheetmetal components were

Exterior
(Cont'd):

damaged from either direct contact or induced buckling. The left front door was jammed closed due to the deformation to the vehicle. Rescue personnel used emergency equipment to pry open the door and subsequently cut the hinges to remove the door from the vehicle. The left rear door was jammed closed and again, rescue workers pried the door open to treat the injured driver. The right side doors were jammed due to the severe deformation to the passenger compartment area. All glazing was damaged by the impacts with the exception of the left rear door glazing and its quarter window. The windshield was removed by rescue personnel during extrication of the driver.

CDC:	<u>Event Number</u>	<u>Object Contacted</u>	
	1	12-RBEW-1	Delineator post
	2	02-RFEN-1	Delineator post
	3	00-FDMW-3	Tree branches
	4	03-FZLS-1	Small diameter tree
	5	00-RFEN-3	20.3cm (8") diameter tree
	6	00-RFEN-2	Small diameter tree
	7	00-RPAN-5	50.8cm (10") diameter tree

Repair	
Cost:	Total loss

Interior:

The interior of the Ford Crown Victoria was severely damaged as a result of exterior deformation and driver contact. The right passenger side impact with the 50.8cm (10") diameter tree produced severe intrusion of the right side components. Maximum intrusion involved 83.8cm (33") of lateral displacement of the right roof side rail, the roof and the upper B-pillar at the side rail juncture. Due to the severe lateral displacement of the side rail, the roof was crushed to a near vertical surface on the interior of the vehicle. The mid right B-pillar and right front door panel intruded into the center front occupant space, resulting in a lateral displacement of 76.7cm (30.2").

The driver of the vehicle moved laterally to the right in response to the right side tree impacts. His knees and lower legs initially contacted the fuse box cover and the knee bolster. The fuse box cover was scuffed 53-61cm (21-24") left of center and 41-46cm (16-18") below the top surface of the instrument panel. A lower leg scuff was noted to the bolster 39-46cm (15.5-18.3") left of center and 38-43cm (15-17") below the upper panel. The driver's right knee contacted the protrusion of the bolster at the base of the steering column. A scuff mark and disruption of the vinyl covering was noted 38-46cm (15-18") left of center. The lateral aspect of the driver's right knee contacted the center mid instrument panel (scuff) and the center mounted police radio equipment. Although the radios were removed prior to our inspection of the vehicle, a deformed bracket was found in the vehicle, indicating contact to the components.

The driver's head and facial areas impacted the intruding vertical surface of the roof. The 11.4cm (4.5") diameter contact cracked the backer panel to the headliner and bowed the roof panel outward .6cm (.25"). The contact point was located 38-51cm (15-20") rearward of the A-pillar and 22-34cm (8.8-13.3") above the roof side rail. His right forearm impacted the right siderail 20-29cm (8-11.5") rearward of the A-pillar, depositing tissue transfers on the fabric covering. The driver's thoracic area contacted the B-pillar; however, no

Interior (Cont'd): evidence of contact was visible on the vinyl covering.

As the driver responded to the lateral impact forces, his upper torso slid out of the manual shoulder belt webbing. His pelvic area subsequently loaded the lap belt webbing which pulled the webbing against the crossbar on the latchplate. The webbing abraded the plastic coating on the crossbar on the back side of the component.

SUPPLEMENTAL RESTRAINT SYSTEM

The 1991 Ford LTD Crown Victoria was equipped with a supplemental driver's air bag system that deployed during the multiple impact, off-road crash sequence. The module cover opened in the conventional H-configuration at the designated tear points. The large upper flap measured 20.3cm (8") in width x 12.4cm (4.875"), while the lower flap had respective measurements of 20.3cm (8") x 3.8cm (1.5"). The air bag was constructed of a woven nylon fabric with a neoprene liner and measured approximately 61cm (24") in diameter (seam-to-seam) in its deflated state. Two 2.5cm (1") diameter venting ports were located on the back side of the air bag (side away from driver) at the 2 and 8 o'clock positions. The bag was tethered by four internal tether straps that were sewn to the center face of the bag in a 17.8cm (7") diameter pattern with three rows of orange stitching. Members of the [REDACTED] Highway Patrol's Multi-Disciplinary Accident Investigation Team (M.A.I.T.) properly removed the deployed air bag module from the involved patrol vehicle.

The upper center portion of the air bag was heavily stained by blood from the driver as he came to rest slumped against the deflated air bag. His left hand came to rest under the upper module flap and was pressed against the air bag and the inflator housing. As a result of contact with the hot inflator housing, the heat was transmitted through the bag which subsequently burned the dorsal surface of his left middle, ring, and fifth fingers. The contact also melted the face of the bag at the 9:30 o'clock position. The melted area measured 1.3 x 7.0cm (0.5 x 2.75") and was horizontally located 8.3-9.5cm (3.25-3.75") above the mid point of the bag and 19.1-26cm (7.5-10.25") left of the vertical centerline. The melted area was also located 4.4-10.2cm (1.75-4.0") inboard and toward the driver from the peripheral seam. Upon magnification of the melted area, tissue fragments and blood were found fused to the nylon fabric.

During Calspan's on-site investigation, a representative from TRW (the company that manufactured the air bag module assembly) was present to inspect and dismantle the deployed module assembly for

possible defects. Numerous members of the [REDACTED] Highway Patrol were also present. The TRW representative thoroughly discussed the deployment process of the module and used several models to identify the internal components. During his discussion, he stated that the air bag fabric had a melting point of 154-177° C (310-350° F) and that the nylon/neoprene material would not support a flame. The inflator housing and its internal filtering screens were manufactured from stainless steel. The TRW representative stated that the inflator module reaches deployment temperatures of 300° C (578° F) and cools slowly due to its isolated, non-vented location within the steering assembly.

The module assembly was transported to a state operated laboratory where a machinist drilled and removed the twelve (12) retaining rivets that attached the air bag and inflator module to the stamped mounting bracket. The air bag and the exterior of the inflator module were thoroughly inspected. The internal surface of the air bag and a tether strap were melted from contact with the hot inflator module. The face of the inflator module above the radial inflation ports contained deposits of melted neoprene and woven nylon air bag material. These melted transfers, in combination with the melted air bag which contained tissue and blood deposits, confirmed the source of the burns to the driver's left hand. Additional exterior inspection of the inflator assembly did not yield evidence of component failure. There was no damage or burn-through of the module or filtering screens; therefore, it was agreed upon that further dismantling of the inflator assembly was not necessary. The involved air bag module was identified by the following bar-coded numbers that were affixed to the back side of the mounting bracket:

[REDACTED] and [REDACTED]

COLLISION
SEQUENCE

Pre-Crash:

The driver of the marked police 1991 Ford LTD Crown Victoria was on routine patrol and was exiting a parking lot of a local service station to proceed in an easterly direction on the mountainous two-lane state route. As he was about to exit the parking lot, he observed a westbound vehicle traveling at a high rate of speed. The driver activated the vehicle's emergency equipment (flashing lights and siren) and initiated a U-turn to pursue the westbound vehicle.

During the pursuit, the driver of the Crown Victoria had negotiated a moderate left curve; however, as the vehicle exited the curve, it drifted wide onto

the right (north) shoulder. Based on the physical evidence at the crash scene, the driver initiated a counterclockwise steering input and braked in an attempt to maintain control of the vehicle. The right side tires of the vehicle departed the paved right shoulder onto the loose cinder material that bordered the shoulder. As a result the vehicle broke traction and initiated a counterclockwise yaw. The right rear quarter panel impacted a delineator post that was located at the edge of the shoulder. The minor severity impact did not alter the trajectory of the vehicle as it crossed the travel lanes. The vehicle deposited four wheel centrifugal tire marks on the asphalt road surface. The investigating officer documented approximately 76.2m (250') of centrifugal tire marks prior to the vehicle crossing the left (south) white edgeline. At the time of our inspection of the crash scene, which occurred nearly 3 months after the crash, 42.7m (140') of tire marks were still visible on the asphalt road surface. As the vehicle crossed the south (left) edgeline of the roadway, it had rotated approximately 80° in a CCW direction.

The ~~Vehicle~~ Highway Patrol computed an initial speed of 119.1 KPH (74 mph) for the vehicle as it exited the curve, using the critical curve formula.

Crash:

The right front fender of the Crown Victoria impacted and dislodged a steel delineator post from the cinder and earth south shoulder. The impact resulted in minor damage to the vehicle and produced an impact force of 2 o'clock. Again, the minor severity impact with the delineator did not alter the trajectory of the vehicle.

The Crown Victoria exited the shoulder area in a near-broadside orientation and became airborne as it traversed an earth embankment that paralleled the roadway. The embankment had a negative slope of approximately 45°. As the vehicle

traveled down the embankment, the frontal and hood areas contacted overhanging tree branches from a tree that was located 7.6m (25') outboard of the roadedge. The impact produced minor damage to the vehicle as it continued on a broadside trajectory. The front bumper and right push bumper bar impacted several small diameter trees as the undercarriage subsequently contacted the ground, which displaced the front structure upward.

The vehicle began to pitch to its right as its center of gravity continued in a southwesterly direction. The upper surface of the right front fender and hood impacted a 20.3cm (8") diameter tree that was located 9.1m (30') outboard of the roadedge. At impact with the tree, the vehicle had traveled approximately 23m (75') along the embankment. Due to the lateral pitching of the vehicle, the resultant direction of force was non-horizontal (00 o'clock). The vehicle fractured the tree 81.3cm (32") above ground level and overrode the remaining trunk, displacing the roots of the tree.

The right passenger compartment area of the vehicle subsequently impacted a 25.4cm (10") diameter cedar tree that was located 2.4m (8') east of the struck 20.3cm (8") diameter tree. At impact with the tree, the vehicle was pitched slightly to its right and struck the tree with its right roof, siderail, door and sill areas. Maximum crush was 83.8cm (33") located on the siderail at the B-pillar area. Again, the vehicle fractured the 25.4cm (10") diameter tree 1.9m (6'3") above the ground and deflected the remaining stump to the east as it overrode the tree trunk. The force of the impact hurled the upper portion of the tree into a wooded area where it came to rest 6.1m (20') to the east of its struck location.

The supplemental driver's air bag system deployed during the multiple impact crash sequence. Although unconfirmed, the SRS probably deployed early in the sequence

as the front bumper and undercarriage impacted the ground and several small diameter trees. All impacts involved force directions that were primarily lateral (within the 2-3 o'clock sector) and estimated velocity changes that were equivalent to the required threshold of 13-19 KPH (8-12 mph) necessary for deployment.

Post-Crash:

Final
Rest -

The Ford Crown Victoria came to rest on its wheels at the base of the embankment, facing in a southerly direction. At rest the vehicle was approximately 6.1m (20') east of the struck 25.4cm (10") diameter tree. Due to the slope of the embankment, the vehicle was barely visible from the roadway.

Driver
Activities -

The driver lost consciousness as a result of a head impact with the intruding roof. He slumped forward over the steering assembly and came to rest with his left hand against the air bag inflation module. Passing motorists noted the dust in the area of the crash and observed the vehicle at rest. They rushed down the embankment and pushed the driver into the seatback as he was bleeding profusely from the nose. Another motorist, who stopped at the scene, drove to a local store and telephoned for police and rescue assistance.

Police
Activities -

Several police units from the County Sheriff's Department and the Highway Patrol responded to the call and arrived on-scene. The investigating officer received notification of the crash and arrived 47 minutes following the crash.

Rescue
Activities -

The local fire department and emergency medical personnel responded to the scene. They initially treated and evaluated the driver in the vehicle. He had regained consciousness, but was unaware of what had occurred. The [REDACTED] requested the service of a helicopter transport to a trauma center in [REDACTED] CA.

The driver was removed from the vehicle and carried up the embankment to an awaiting ambulance. He was transported to a remote helicopter landing site and flown to the trauma center where he was admitted for treatment of his injuries.

Scene
Clearance -

Following the removal and subsequent transport of the driver and the on-scene police investigation, the vehicle was winched up an embankment and towed from the scene.

HUMAN FACTORS/OCCUPANT DATA

Driver:	54 year old male
Height:	179.1cm (70.5")
Weight:	99kg (220 lbs.)
Occupation:	Police officer
Active Restraint System Usage:	3-point lap and shoulder belt system
Usage Source:	Vehicle inspection, police report
Eyeglasses:	None
Vehicle Familiarity:	Not assigned patrol vehicle, has driven similar vehicles daily over the past year
Route Familiarity:	Daily, routine patrol area
Trip Plan:	In pursuit of a speeding vehicle
Manner of Transport From Scene:	Ambulanced from the scene to an emergency heliport then flown by helicopter to a trauma center in ██████████, CA
Type of Medical Treatment:	Admitted to the hospital for 24 days for treatment of his injuries, readmitted for follow-up surgeries

DRIVER INJURIES

<u>Injury</u>	<u>Severity (OIC/AIS)</u>	<u>Source</u>
Fractured right ribs 2-9 with flail chest and right hemothorax	Severe (CRFS-4)	Intruding right B-pillar
Right pulmonary contusion	Serious (CRCP-3)	Intruding right B-pillar
Full thickness thermal burns of the dorsal aspect of the left middle, ring, and 5th fingers with loss of the extensor tendons and devascularization of part of the bones within the digits	Minor (WLBI-1)	Contact against the air bag inflator module
Comminuted fracture of the right radial head	Serious (RRFS-3)	Intruding right roof side rail
Fracture of the right proximal ulna	Moderate (RRFS-2)	Intruding right roof side rail
Closed head injury with loss of consciousness and residual cognitive deficits (amnesia), negative head CT	Moderate (HWKB-2)	Intruding roof panel
Non-displaced fracture of the right zygoma	Moderate (FRFS-2)	Intruding roof panel
T ₁₂ spinous process fracture	Moderate (BSFS-2)	Probable rebound contact into left front door panel or seatback
Right clavicle fracture	Moderate (SRFS-2)	Intruding right roof side rail

<u>Injury</u>	<u>Severity (OIC/AIS)</u>	<u>Source</u>
Displaced nasal fracture	Moderate (FCFS-2)	Intruding roof
Nasal laceration	Minor (FCLI-1)	Intruding roof and headliner
Right earlobe laceration	Minor (HRLE-1)	Intruding roof and headliner
Superior scalp laceration	Minor (HSLI-1)	Intruding roof and headliner
D i s l o c a t e d (loosened) teeth nos. 5-8	Minor (FIDS-1)	Intruding roof panel

DRIVER KINEMATICS

The driver of the Ford Crown Victoria was in a normal seated position pre-crash with both hands on the steering wheel while in pursuit of the speeding vehicle. He was properly wearing the manual 3-point lap and shoulder belt system. Rstraint usage was supported by driver interview data, blood stains on the upper shoulder belt webbing, and from load induced abrasions on the inner plastic surface of the latchplate. The driver stated that he routinely drove the Crown Victoria with the seat adjusted to a mid-track position and the seatback set to the most vertical position. He added that the tilt steering wheel was adjusted to the center position.

At impact with the trees, the supplemental driver's air bag system deployed. The driver was probably slightly out of position to his right due to the pre-crash counterclockwise rotation of the vehicle. He was further displaced to his right by each tree impact as he responded to the lateral impact forces. The driver's upper torso slid out of the manual shoulder belt webbing while his pelvic area loaded the lap belt portion of the 3-point system. His loading force against the lap belt pulled the webbing through the latchplate which abraded the inner plastic surface of the latchplate's fixed crossbar. The driver's knees contacted the fuse box cover and the knee bolster which scuffed the contacted components. His right knee contacted the bolster at the protrusion for the steering column and disrupted the vinyl covering of the bolster. These contacts did not result in injury to the driver's lower extremities. The lateral aspect of the driver's right knee impacted the left edge of the lower mid instrument panel (scuff mark) and the center mounted police radio equipment. The radio equipment was removed from the vehicle prior to our inspection; however, a bracket for the equipment was deformed to the right,

indicating driver contact. Again, no injury resulted from the lower extremity contact.

The driver's right forearm flailed upward with respect to his seated position and impacted the intruding right roof siderail 20.3-29.2cm (8-11.5") rearward of the upper A-pillar. Tissue transfers evidenced the contact which resulted in a comminuted fracture of the right radial head and a fracture of the right proximal ulna. The driver's right shoulder subsequently impacted and scuffed the intruding right roof side rail immediately forward of the B-pillar. The contact fractured the mid-portion of the driver's right clavicle. His right lateral chest area impacted the intruding right upper B-pillar and possibly the struck tree as the vehicle crushed to maximum engagement. Although no contact evidence was visible on the vinyl jacket covering the B-pillar, the driver sustained fractured right ribs 2-9 with flail chest, right pneumothorax, and a right pulmonary contusion.

The driver's head impacted the intruding headliner and roof panel on the right side of the vehicle. Due to the non-horizontal impact with the tree, the roof was displaced to a vertical orientation over the right front seated position. The head contact was located 36.8-50.8cm (14.5-20") rearward of the upper right A-pillar and 27.9cm (11") above the side rail. The driver's head cracked the backer to the headliner and bowed the roof panel approximately 0.6cm (.25") outward. Faint tissue transfers were visible on the headliner material that surrounded the 11.4cm (4.5") diameter contact. As a result of the impact, the driver sustained a laceration of the superior scalp, a right earlobe laceration, a nasal laceration with a displaced fracture of the nasal bone, a fracture of the right zygoma, and a closed head injury with loss of consciousness and residual cognitive deficits (amnesia). In addition to the head and facial injuries that were identified on the medical reports, the driver stated that he sustained minor dislocations (loosened) of the right upper teeth, nos. 5-8. The dislocated teeth were attributed to the head and facial contact with the intruding roof.

The driver subsequently rebounded across the interior of the vehicle into the left front seatback and/or left front door panel. He sustained a fracture of the spinous process of T₁₂ from the probable rebound contact. There was no contact evidence to the components from his rebound trajectory. Prior to coming to rest within the vehicle, the driver's left hand moved under the upper air bag module cover flap as the driver slumped forward in an unconscious state against the steering wheel and the air bag module assembly. The dorsal aspect of his left middle, ring, and fifth fingers were pressed against the deflated air bag and the hot inflation module. The heat from the stainless steel inflation module melted the face of the bag and an internal tether strap at the 10 o'clock position and was transmitted into the driver's

fingers, which resulted in full thickness thermal burns with loss of the extensor tendons and devascularization of part of the bones within the digits.

Several passing motorists noted the dust from the crash and observed the vehicle at final rest. They rushed to the vehicle and found the driver slumped against the steering wheel, bleeding profusely from the nasal injuries onto the deflated air bag. The motorists pulled the driver back into the seatback which disengaged his hand from the air bag module assembly.

SELECTED PRINTS



Pre-crash Trajectory Of The Ford Crown Victoria.



Vehicle's Rotational Trajectory Across The Travel Lanes,
Beginning Of The Right Side Centrifugal Tire Marks.



Beginning Of The Left Side Centrifugal Tire Marks.



Vehicle Departs Left Roadedge In A Near Broadside Orientation.



Vehicle Travels Down Earth Embankment.



Struck Tree Branches
And 20.3cm (8") and 25.4cm (10") Diameter Cedar Trees.



Remainder of Struck Trees.



Final Impact Sequence Against The 25.4cm (10") Diameter Tree.



Struck And Displaced Delineator Post.



Mid Section Of The Struck
And Fractured 25.4cm (10") Diameter Tree.



Lookback View Of The Crash Scene.



Lookback View Up The Earth Embankment.



Lookback View Of The Vehicle's Roadway Departure.



Frontal View Of The Ford Crown Victoria.



Tree Impact Damage To The Right Bumper Push Bar.



Left Front Three-Quarter View.



Left Side View.



Left Rear Three-Quarter View.



Rear View.



Right Rear Three-Quarter View.



Right Side View.



Primary Impact Damage To The Right Passenger Compartment Area.



Overhead View Showing The Extent Of Crush.



Tree Impact Damage To The Right Front Fender Area.



Right Front Three-Quarter View.



Overall View Of The Deployed Air Bag.



Melted Area Of The Deployed Air Bag.



Additional Views Of The Melted Area Of The Air Bag.



Upper Air Bag Module Flap.



Perpendicular View Of The Module Flaps.



Interior View With The Air Bag Module Assembly Removed.



Driver's Trajectory And Contact Points.



Knee And Lower Leg Contact Points
To The Knee Bolster And The Lower Panel



Driver's Active 3-Point Belt System.



Belt Loading Abrasions To The Plastic Coating On The Latchplate.



Probable Right Leg Contact To The
Center Mounted Radio Equipment (Removed) .



Head, Arm, And Shoulder Contact Points
To The Intruding Roof And Side Rail.



Head Contact To Headliner And Roof.



Right Shoulder And Arm Contacts To The Roof Side Rail.



Apparent Tissue Transfer From Right Forearm Contact
To Roof Side Rail.



Location Of Burn With Respect To The Center Of The Air Bag.



Closeup Views Of The Burned Area.



Location Of Burn With Respect To The Peripheral Seam.



View Of A Melted Internal Tether Strap
Through The Left Venting Port.



Backside Of The Removed Module Assembly.



Removed Inflator Assembly From The Retaining Plate.



Melted Bag Material On The Face Of The Inflator.



Views Of The Radial Inflation Ports
Of The Inflator Assembly.



Additional Views Of The Radial Inflation Ports.



Internal Views Of The Melted Areas Of The Air Bag.

“GRAPHIC” PHOTOGRAPHS AND IMAGES

The following “GRAPHIC” Photographs and Images have been removed from this case.

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If you would like a copy of these photographs and/or images please write to:

MARJORIE SACCOCCIO
VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER
55 BROADWAY
CAMBRIDGE, MA 02142

In the body of your request please include the case, photograph and image number(s).



Sectional View Of A Similar TRW Inflator.

SLIDE INDEX

<u>Slide No(s).</u>	<u>Description</u>
1	Accident schematic
2	Driver injury mannequin
3,4	Pre-crash trajectory of the police vehicle
5	Right rear tire begins to mark
6	Right front and left rear tires begin to mark
7	Left front tire begins to mark
8	Vehicle departs left roadedge in a near broadside orientation
9	Vehicle traverses embankment and contacts tree branches
10	Struck trees
11	Struck tree that resulted in severe right side damage to vehicle
12	Final rest position of vehicle
13	Section of struck tree, impacted tree in foreground
14	Lookback view of vehicle's trajectory
15	Frontal view of the Ford Crown Victoria
16	Left front three-quarter view
17	Left side view, LF door removed by rescue personnel
18	Left rear three-quarter view
19	Rear view
20	Right rear three-quarter view
21	Right side view
22	Primary impact damage to right side area
23	Longitudinal view showing the extent of crush

SLIDE INDEX (CONT'D.)

<u>Slide No(s).</u>	<u>Description</u>
24	Right front three-quarter view
25	Overall interior view of the driver's trajectory and contact points
26	Deployed driver's air bag
27	Steering wheel assembly with module removed
28	Burned (melted) area of air bag with tissue from driver's hand contact
29	Location of burn mark with respect to peripheral seam and vent port
30	Perpendicular view of the module flaps
31,32	Driver's knee/lower leg contacts to the knee bolster
33,34	Driver's head, right shoulder and forearm contacts to the intruding side rail and headliner
35	Tissue transfer from right forearm contact
36	Right shoulder fabric transfer/impression on headliner
37	Driver's head contact to headliner
38	Slight deformation to upper steering wheel rim
39	Blood stain on shoulder belt webbing
40	Belt abrasions to the latchplate

CASE NUMBER CA 9212

MISSING SLIDES

THE FOLLOWING SLIDES ARE NOT INCLUDED IN THIS CASE:

SLIDE NUMBER(S)

#1

#2



CA 9212 #3



CA 9212 #4



CA 9212 #5



CA 9212 #6



CA9212 #7



CA 9212 #8



CA 9212 #9



CA9212 #10



CA9212 #11



CA9212 #12



CA 9212 #13



CA9212 #14



CA 9212 #15



CA9212 #16



CA9212 #17



CA9212 #18



CA 9212 #19



CA 9212 #20



CA9212 #21



CA9212 #22



CA 9212 #23



CA 9212 #24



CA 9212 #25
Best Available



CA9212 #28



CA9212 #27
Best Availabel



CA 9212 #28
Best Available



CA 9212 #29
Best Available



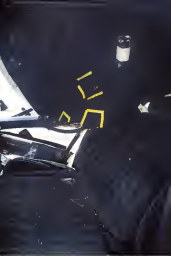
CA 9212 #30
Best Available



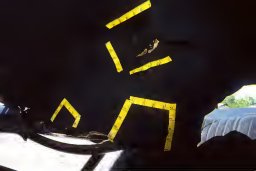
CA9212 #31
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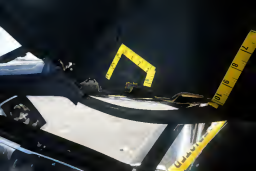
CA 9212 #32
Best Available



CA 9212 #33
Best Available



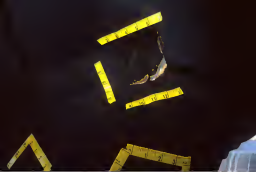
CA 9212 #34
Best Available



CA 9212 #35
Best Available



CA9212 #36
Best Available



CA9212 #37
Best Available



CA9212 #38



CA 9212 #39
Best Available



CA9212 #40

APPENDIX A

Police Accident Report

STATE OF CALIFORNIA

TRAFFIC COLLISION CODING

PAGE 2

DATE OF COLLISION MAR 92	TIME (HOUR) 16:09	OFFICER NUMBER [REDACTED]	OFFICER NAME [REDACTED]	PLATE NUMBER [REDACTED]	VEHICLE TYPE [REDACTED]	OWNER NAME / ADDRESS [REDACTED]	NOTIFIED YES <input type="checkbox"/> NO <input type="checkbox"/>
PROPERTY DAMAGE	DESCRIPTION OF DAMAGE						

SEATING POSITION 	OCCUPANTS A - NONE IN VEHICLE B - UNKNOWN C - LAP BELT USED D - LAP BELT NOT USED E - SHOULDER HARNESS USED F - SHOULDER HARNESS NOT USED G - LAP / SHOULDER HARNESS USED H - LAP / SHOULDER HARNESS NOT USED J - PASSIVE RESTRAINT USED K - PASSIVE RESTRAINT NOT USED	SAFETY EQUIPMENT L - AIR BAG DEPLOYED M - AIR BAG NOT DEPLOYED N - OTHER P - NOT REQUIRED CHILD RESTRAINT Q - IN VEHICLE USED R - IN VEHICLE NOT USED S - IN VEHICLE USE UNKNOWN T - IN VEHICLE IMPROPER USE U - NONE IN VEHICLE	EJECTED FROM VEHICLE 0 - NOT EJECTED 1 - FULLY EJECTED 2 - PARTIALLY EJECTED 3 - UNKNOWN
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ITEMS MARKED BELOW FOLLOWED BY AN ASTERISK (*) SHOULD BE EXPLAINED IN THE NARRATIVE

PRIMARY COLLISION FACTOR LIST NUMBER (S) OF PARTY AT FAULT	TRAFFIC CONTROL DEVICES	1	2	3	TYPE OF VEHICLE	1	2	3	MOVEMENT PRECEDING COLLISION
A VC SECTION VIOLATED: 22350	A CONTROLS FUNCTIONING				A PASSENGER CAR / STATION WAGON				A STOPPED
B OTHER IMPROPER DRIVING *	B CONTROLS NOT FUNCTIONING *				B PASSENGER CAR / STATION WAGON				B PROCEEDING STRAIGHT
C OTHER THAN DRIVER *	C CONTROLS OBSCURED				C MOTORCYCLE / SCOOTER				C RAN OFF ROAD
D UNKNOWN *	D NO CONTROLS PRESENT / FACTOR *				D PICKUP OR PANEL TRUCK				D MAKING RIGHT TURN
E FELL ASLEEP *	TYPE OF COLLISION				E PICKUP / PANEL TRUCK W / TRAILER				E MAKING LEFT TURN
WEATHER (MARK 1 TO 2 ITEMS)	A HEAD-ON				F TRUCK OR TRUCK TRACTOR				F MAKING U TURN
A CLEAR	B SIDESWIPE				G TRUCK / TRUCK TRACTOR W / TRAILER				G BACKING
B CLOUDY	C REAR END				H SCHOOL BUS				H SLOWING / STOPPING
C RAINING	D BROADSIDE				I OTHER BUS				I PASSING OTHER VEHICLE
D SNOWING	E HIT OBJECT				J EMERGENCY VEHICLE				J CHANGING LANES
E FOG / VISIBILITY	F OVERTURNED				K HIGHWAY CONST. EQUIPMENT				K PARKING MANEUVER
F OTHER *	G VEHICLE / PEDESTRIAN				L BICYCLE				L ENTERING TRAFFIC
G WIND	H OTHER *				M OTHER VEHICLE				M OTHER UNSAFE TURNING
LIGHTING	MOTOR VEHICLE INVOLVED WITH				N PEDESTRIAN				N XING INTO OPPOSING LANE
A DAYLIGHT	A NON-COLLISION				O OTHER				O PARKED
B DUSK - DAWN	B PEDESTRIAN								P MERGING
C DARK - STREET LIGHTS	C OTHER MOTOR VEHICLE								Q TRAVELING WRONG WAY
D DARK - NO STREET LIGHTS	D MOTOR VEHICLE ON OTHER ROADWAY								R OTHER *
E DARK - STREET LIGHTS NOT FUNCTIONING *	E PARKED MOTOR VEHICLE								
ROADWAY SURFACE	F TRAIN				OTHER ASSOCIATED FACTOR(S) (MARK 1 TO 2 ITEMS)				
A DRY	G BICYCLE				A VC SECTION VIOLATION:				
B WET	H ANIMAL				B VC SECTION VIOLATION:				
C SNOWY - ICY	I AXED OBJECT				C VC SECTION VIOLATION:				
D SLIPPERY (MUDDY, OILY, ETC.)	J OTHER OBJECT				D				
ROADWAY CONDITIONS (MARK 1 TO 2 ITEMS)	PEDESTRIAN'S INVOLVED				E VISION OBSCUREMENT				
A HOLES, DEEP RUT *	A NO PEDESTRIAN INVOLVED				F INATTENTION *				
B LOOSE MATERIAL ON ROADWAY *	B CROSSING IN CROSSWALK AT INTERSECTION				G STOP & GO TRAFFIC				
C OBSTRUCTION ON ROADWAY *	C CROSSING IN CROSSWALK - NOT AT INTERSECTION				H ENTERING / LEAVING RAMP				
D CONSTRUCTION - REPAIR ZONE	D CROSSING - NOT IN CROSSWALK				I PREVIOUS COLLISION				
E REDUCED ROADWAY WIDTH	E IN ROAD - INCLUDES SHOULDER				J UNFAMILIAR WITH ROAD				
F FLOODED *	F NOT IN ROAD				K DEFECTIVE VEH. EQUIP.				
G OTHER *	G APPROACHING / LEAVING SCHOOL BUS				L UNINVOLVED VEHICLE				
H NO UNUSUAL CONDITIONS					M OTHER *				
SKETCH					N NONE APPARENT				
					O RUNAWAY VEHICLE				

SKETCH

INDICATE NORTH

TEL:

04

3

INJURED / WITNESSES / PASSENGERS

PL OF C		92		TIME		DATE		STREET		NUMBER						
WITNESS ONLY	PASSENGER ONLY	AGE	SEX	EXTENT OF INJURY ("X" ONE)				INJURED WAS ("X" ONE)				PARTY NUMBER	SEAT POS.	SAFETY EQUIP.	EJECTOR	
				FATAL INJURY	SEVERE INJURY	OTHER VEHICLE INJURY	COMPLAINT OF PAIN	DRIVER	PASSENGER	PEDESTRIAN	BIKES					OTHER
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

NAME / D.O.B. / ADDRESS: **PARTY #1**

IS ONLY TRANSPORTED BY: **AMBULANCE AND CHP HELICOPTER**

DE INJURED: **COMPOUND FRACTURE TO HIS LEFT ELBOW, PNEUMO-TORAX WITH PUNCTURES TO BOTH LUNGS AND A FACIAL FRACTURE TO HIS RIGHT EYE.**

IS ONLY TRANSPORTED BY: **5/61 F/M**

TAKEN TO: **TELEPHONE**

NAME / D.O.B. / ADDRESS: **41 M**

IS ONLY TRANSPORTED BY: **TELEPHONE**

TAKEN TO: **TELEPHONE**

NAME / D.O.B. / ADDRESS: **40 M**

IS ONLY TRANSPORTED BY: **TELEPHONE**

TAKEN TO: **TELEPHONE**

NAME / D.O.B. / ADDRESS: **TELEPHONE**

IS ONLY TRANSPORTED BY: **TELEPHONE**

TAKEN TO: **TELEPHONE**

NAME / D.O.B. / ADDRESS: **TELEPHONE**

IS ONLY TRANSPORTED BY: **TELEPHONE**

TAKEN TO: **TELEPHONE**

NAME / D.O.B. / ADDRESS: **TELEPHONE**

IS ONLY TRANSPORTED BY: **TELEPHONE**

TAKEN TO: **TELEPHONE**

TEL:

10.02

RELATIVE/SUPPLEMENTAL

(Rev 7-80) OPI 042

Page 5

DATE OF OCCURRENCE -92	TIME (2400) 1900	NCIC NUMBER	OFFICER I.D. NUMBER	NUMBER
TYPE OF CASE * Relative Supplemental	* ONE <input checked="" type="checkbox"/> Collision report <input type="checkbox"/> Other:	TYPE SUPPLEMENTAL (IF APPLICABLE) <input type="checkbox"/> BA update <input type="checkbox"/> Fatal <input type="checkbox"/> Hazardous materials <input type="checkbox"/> School bus <input type="checkbox"/> Hit and run update <input type="checkbox"/> Other:		
COUNTY/JUDICIAL DISTRICT				REPORTING DISTRICT/LEAD
SUBJECT SR E. OF				CITATION NUMBER
STATE HIGHWAY RELATED <input type="checkbox"/> Yes <input type="checkbox"/> No				

LEGEND

STATION LINE:

A station line was established by laying a 100 ft. tape parallel to the center of SR- . Station 0+00 was established at a point approximately 380 feet East of Mile Post AMA 44.00

STATION LOG:

STATION:

LOCATION:

DESCRIPTION:

0+00	R-8FT. 3IN.	START OF SKID #1 (A THIN LINE CENTRIFUGAL SKID)
0+10	R-8FT. 6IN.	SKID CONTINUES
0+20	R-9FT. 3IN.	SKID CONTINUES
0+30	R-9FT. 8IN.	SKID CONTINUES
0+40	R-9FT. 10IN.	SKID CONTINUES
0+50	R-10FT. 0IN.	SKID CONTINUES
0+60	R-10FT. 3IN.	SKID CONTINUES
0+70	R-10FT. 4IN.	SKID CONTINUES
0+80	R-10FT. 8IN.	SKID CONTINUES
0+90	R-10FT. 7IN.	SKID CONTINUES
1+10	R-10FT. 6IN.	SKID CONTINUES
1+20	R-10FT. 5IN.	SKID CONTINUES
1+30	R-10FT. 4IN.	SKID CONTINUES
1+40	R-10FT. 2IN.	SKID CONTINUES
1+50	R-10FT. 0IN.	SKID CONTINUES
1+60	R-9FT. 8IN.	SKID CONTINUES
1+70	R-9FT. 4IN.	SKID CONTINUES
1+80	R-8FT. 10IN.	SKID CONTINUES
1+90	R-8FT. 2 IN.	SKID CONTINUES
2+00	R-7FT. 4IN.	SKID CONTINUES
2+10	R-6FT. 7IN.	SKID CONTINUES
2+20	R-5FT. 7IN.	SKID CONTINUES
2+30	R-4FT. 6IN.	SKID CONTINUES
2+40	R-3FT. 3 IN.	SKID CONTINUES
2+50	R-2FT. 2IN.	SKID CONTINUES

REPORTER'S NAME AND I.D. NUMBER

REVIEWER'S NAME

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CALIFORNIA
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INCIDENT OCCURRENCE # 92	TIME (2400) [REDACTED]	NCIO NUMBER [REDACTED]	OFFICER ID. NUMBER [REDACTED]	NUMBER [REDACTED]
TYPE Relative Supplemental	<input type="checkbox"/> Collision report <input type="checkbox"/> Other:	TYPE SUPPLEMENTAL (IF APPLICABLE) <input type="checkbox"/> BA update <input type="checkbox"/> Fatal <input type="checkbox"/> Hit and run update <input type="checkbox"/> Hazardous materials <input type="checkbox"/> School bus <input type="checkbox"/> Other:		
COUNTY/JUDICIAL DISTRICT [REDACTED]				REPORTING DISTRICT/BEAT [REDACTED]
SUBJECT SC [REDACTED] E. of [REDACTED]				CITATION NUMBER [REDACTED] STATE HIGHWAY RELATED <input type="checkbox"/> Yes <input type="checkbox"/> No

 2+60
 2+70
 STATION:

 R-0FT 6IN.
 L-1 FT 0IN.
 LOCATION:

 SKID CONTINUES
 SKID CONTINUES
 DESCRIPTION:

 2+80
 3+10
 3+24
 3+48

 L-4FT 8IN.
 L-9FT. 0IN.
 L 13 FT.
 L 18FT 2IN...

 SKID #1 CONTINUES
 SKID CONTINUES
 SKID LEAVES ASPHALT
 SKID GOES OVER EMBANK-
 MENT.

 0+60
 0+70
 0+80

 R-11FT. 4IN.
 R-11FT. 6IN.
 R-11FT. 8IN.

 START OF SKID #2
 SKID CONTINUES
 SKID CONTINUES (EDGE OF
 ASPHALT, WHICH IS
 COVERED WITH DIRT)
 SKID CONTINUES.
 SKID CONTINUES IN DIRT.
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES (WIDE
 SKID AND AT THE RT.
 EDGE LINE).

 0+90
 1+00
 1+20
 1+40
 1+60
 1+80
 2+00
 2+20

 R-11FT. 10IN.
 R-12FT. 4IN.
 R-12FT 8IN.
 R-12FT. 9IN.
 R-12FT. 8IN.
 R-12FT. 5IN.
 R-11FT. 10IN.
 R-10FT. 9IN.

 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES (WIDE
 SKID AND AT THE RT.
 EDGE LINE).
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES
 SKID CONTINUES, A THICK
 SIDE SKID.
 SKID ON EDGE LINE
 SKID ENDS OVER THE
 EMBANKMENT.

 2+40
 2+60
 2+80
 3+00
 3+10
 3+30

 R-9FT. 4 IN.
 R-7FT. 1 IN.
 R-4FT. 6 IN.
 R-1FT. 0IN.
 L-1FT. 1IN.
 L-5FT. 8IN.

 3+50
 3+75

 L-10FT. 5IN.
 L-16FT. 4IN.

 2+10
 2+30

 R-1FT 10 IN.
 CENTER LINE

 START OF SKID #3.
 SKID CONTINUES ACROSS
 CENTER LINE.
 SKID CONTINUES
 SKID CONTINUES

 2+40
 2+60

 L-1FT. 0IN.
 L-3FT. 8IN.

NAME AND ID. NUMBER

REVIEWER'S NAME

DATE

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TEL:

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INCIDENT/OCCURRENCE 1-7-92		TIME (2400) [REDACTED]	NCIC NUMBER [REDACTED]	OFFICER ID NUMBER [REDACTED]	NUMBER [REDACTED]	
TYPE 1. Active 2. Supplemental	<input type="checkbox"/> Collision report <input type="checkbox"/> Other:	TYPE SUPPLEMENTAL (IF APPLICABLE) <input type="checkbox"/> BA update <input type="checkbox"/> Fatal <input type="checkbox"/> Hazardous materials <input type="checkbox"/> School bus <input type="checkbox"/> Hit and run update <input type="checkbox"/> Other:				
COUNTY/JUDICIAL DISTRICT					REPORTING DISTRICT/BEAT	CITATION NUMBER
SUBJECT SP [REDACTED] E. of [REDACTED]					STATE HIGHWAY RELATED <input type="checkbox"/> Yes <input type="checkbox"/> No	

2+90
3+00
STATION:

L-6FT. 10IN.
L-10FT 3IN.
LOCATION:

SKID CONTINUES
SKID CONTINUES
DESCRIPTION:

3+20
3+40

L-14FT. 5IN.
L-18FT. 0IN.

SKID #3 CONTINUES
END OF SKID, OVER
THE EMBANKMENT.

2+17
2+30
2+50
2+60
2+70
2+80
2+90
3+00
3+10
3+20
3+30
3+40

R-6FT 5 IN.
R-5FT. 8IN.
R-4FT. 0IN.
R-3FT. 2IN.
R-2FT. 1IN.
R-0FT. 8IN.
L-1FT. 0IN.
L-2FT. 1IN.
L-4FT 7IN.
L-6FT 5IN.
L-8FT 10IN.
L-11FT 7 IN.

START OF SKID #4
SKID CONTINUES
SKID CONTINUES
SKID CONTINUES
SKID CONTINUES
SKID CONTINUES
SKID CONTINUES
SKID CONTINUES
SKID CONTINUES
SKID CONTINUES
SKID CONTINUES
END OF SKID THAT WAS
VISIBLE.

3+85

L-39FT

LOWER LIMBS OF PINE
TREE DAMAGED TO A HEIGHT
OF 8FT 2INCHES ABOVE
GROUND LEVEL.

3+95

L-41FT.

MARKS IN THE DIRT &
BRUSH LEFT BY V-1.
STUMP OF PINE TREE,
DOWNED TREE S. OF
STUMP.

4+10

L-43FT.

STUMP OF PINE TREE,
DOWNED TREE IN THE
SAME AREA.

4-17

L-45FT.

POINT OF REST OF V-1 AT
REST IN AN UP RIGHT
POSITION.

4-60

L-50FT.

CHANGED NO. NUMBER [REDACTED]	DATE [REDACTED]	REVIEWER'S NAME [REDACTED]	DATE [REDACTED]
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80 576-1

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DATE OF INCIDENT/OCCURRENCE [REDACTED] 92		TIME (2400) [REDACTED]	NCIC NUMBER [REDACTED]	OFFICER ID NUMBER [REDACTED]	NUMBER [REDACTED]
TYPE OF INCIDENT <input checked="" type="checkbox"/> Narrative <input type="checkbox"/> Supplemental		TYPE SUPPLEMENTAL (IF APPLICABLE) <input type="checkbox"/> BA update <input type="checkbox"/> Hazardous materials		<input type="checkbox"/> Fatal <input type="checkbox"/> School bus <input type="checkbox"/> Hit and run update <input type="checkbox"/> Other	
CITY/COUNTY/JUDICIAL DISTRICT				REPORTING DISTRICT/BEAT	CITATION NUMBER
ATTENTION/SUBJECT				STATE HIGHWAY RELATED <input type="checkbox"/> Yes <input type="checkbox"/> No	

FACTS

1. NOTIFICATION RECEIVED CALL AT APPROX. [REDACTED] HRS. AT
 2. SCENE AT APPROX [REDACTED] HRS. PRIOR UNITS ON SCENE.
 3. CALIF. ENGINE [REDACTED] S.O. SGT [REDACTED], DEPUTY [REDACTED]
 4. AND CHP OFF. [REDACTED] ALONG WITH E.M.S. PERSONNEL.

5. SCENE IS AN EAST-WEST, TWO WAY,
 6. TWO LANED RURAL MOUNTAINOUS HIGHWAY WITH
 7. NUMEROUS TURNS AND GRADES. AT SCENE THE ROAD
 8. FOR WEST BOUND TRAFFIC, HAS A SWEEPING LEFT
 9. CURVE ON A 4% DOWN GRADE. THE ROAD CONSISTS
 10. OF ASPHALT AND APPROX. 2' NORTH OF THE NORTH
 11. EDGE LINE IS A DRAINAGE DITCH APPROX 1 1/2' DEEP
 12. FOLLOWED BY A STEEP UPHILL EMBANKMENT.
 13. OFF THE SOUTH ROAD EDGE IS A CINDER SHOULDER
 14. AREA VARYING IN WIDTH BY 6 TO 7'. FOLLOWED BY
 15. A STEEP DOWNHILL EMBANKMENT. THE EAST AND
 16. WEST BOUND LANES ARE SEPARATED BY A PAINTED
 17. DOUBLE YELLOW LINE. — HEAVILY FORESTED
 18. AREA WITH NUMEROUS PINES AND CEDARS VARYING
 19. IN SIZE FROM FULL GROWN TREES TO SAPLINGS. SEE
 20. FACTUAL DIAGRAM FOR ROAD ALIGNMENT AND
 21. MEASUREMENTS.

22. LOCATION — AS LISTED ON PG # 3

23. VEHICLE — V-1 WAS FOUND ON IT'S WHEELS FACING
 24. A SOUTH-WEST DIRECTION APPROX. 40' DOWN
 25. EMBANKMENT OFF SOUTH ROAD EDGE. — V-1 SUSTAINING
 26. TOTAL DAMAGE TO TOP FRONT, REAR AND RIGHT SIDE.

REPORTER'S NAME (OLD NUMBER)

DATE

REVIEWER'S NAME

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DATE OF INCIDENT/OCCURRENCE

TIME (2400)

NCIC NUMBER

OFFICER I.D. NUMBER

NUMBER

92

TYPE

TYPE

Narrative

☒ Collision report☐ Supplemental☐ Other:

TYPE SUPPLEMENTAL (IF APPLICABLE)

☐ BA update☐ Fatal☐ Hit and run update☐ Hazardous materials☐ School bus☐ Other:

CITY/COUNTY/JUDICIAL DISTRICT

REPORTING DISTRICT/BEAT

CITATION NUMBER

CITATIONS/SUBJECT

STATE HIGHWAY RELATED

☐ Yes☐ NoFACTS CONTINUED

6. MECHANICAL - TIRE PRESSURE WAS CHECKED ON V-1 L-F 37 LBS - R-F 38 LBS - L-R 37 LBS AND R-R WITH RIM DAMAGE AT 13 LBS. THE FRONT TIRES HAD 12/32 TREAD DEPTH, R-R 12/32, L-R 5/32. APPROX 1600 MILES ON FRONT BRAKES.

7. SKIDS - V-1 LEFT SEVERAL CENTRIFUGAL TO BROADSIDE SKIDS. LENGTH AND LOCATION SHOWN ON DIAGRAM. - SPEED SKID ANALYSIS BY CPL [REDACTED] REVEALED A SPEED OF APPROX 73 MPH.

8. FIXED OBJECTS - TWO CEDAR TREES APPROX 15 INCHES IN DIAMETER AND SEVERAL SAPLINGS. A CEDAR SNAG ALSO APPROX 15" IN DIAMETER.

9. LOCATION OF DRIVER - P-1 WAS PINNED BEHIND THE WHEEL OF THE PATROL UNIT AND HAD TO BE EXTRICATED BY FIRE AND E.M.S. PERSONNEL. - P-1 TAKEN VIA [REDACTED] AMBULANCE TO THE [REDACTED] AND THEN FLOWN VIA CHP H-20 TO [REDACTED].

OFFICER'S NAME AND I.D. NUMBER

DATE

REVIEWER'S NAME

DATE

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DATE OF INCIDENT/OCCURRENCE 92		TIME (2400) [REDACTED]	NCIC NUMBER [REDACTED]	OFFICER I.D. NUMBER [REDACTED]	NUMBER [REDACTED]
<input type="checkbox"/> ONE <input type="checkbox"/> Narrative <input type="checkbox"/> Supplemental		<input checked="" type="checkbox"/> ONE <input checked="" type="checkbox"/> Collision report <input type="checkbox"/> Other:		TYPE SUPPLEMENTAL (IF APPLICABLE) <input type="checkbox"/> EA update <input type="checkbox"/> Hazardous materials <input type="checkbox"/> Fatal <input type="checkbox"/> School bus <input type="checkbox"/> Hit and run update <input type="checkbox"/> Other:	
CITY/COUNTY/JUDICIAL DISTRICT				REPORTING DISTRICT/BEAT	CITATION NUMBER
TIONS/SUBJECT				STATE HIGHWAY RELATED <input type="checkbox"/> Yes <input type="checkbox"/> No	

STATEMENTS - WITNESSES

MRS. [REDACTED] CONTACTED [REDACTED] PHONE AN [REDACTED] 92
 AT APPROX 200 HRS. MRS. [REDACTED] RELATED, WE WERE
 IN MR [REDACTED] CAR - MY HUSBAND [REDACTED] WAS IN THE
 REAR AND I WAS IN THE RIGHT FRONT AND MR
 [REDACTED] WAS DRIVING. AS WE WERE GOING
 E/B SR [REDACTED] THIS LIGHT COLORED FULL SIZE CAR
 POSSIBLY A CHRYSLER OR CAD CAME W/B AROUND
 THIS CURVE TO THE LEFT OF THE CENTER LINE.
 [REDACTED] MOVED TO HIS RIGHT AS THE LT. COLORED
 CAR GOT BACK INTO THE W/B LANE AND WENT PAST
 US VERY FAST. WHEN HE PASSES I SAW A MALE
 DRIVER WITH BROWN HAIR. I CANNOT SAY FOR SURE
 IF THERE WAS A PASSENGER. MRS. [REDACTED] CONTINUED
 WE PROCEEDED E/B COMING AROUND THIS CURVE WHEN I
 SAW THE POLICE CAR SIDEWAYS IN THE MIDDLE OF THE RD.
 GO OVER THE SIDE.

MR. [REDACTED] SAID DRIVER OF WITNESS VEHICLE RELATED
 I WAS E/B SR [REDACTED] WHEN THIS LT COLORED FULL SIZED
 CAR CAME W/B AROUND THIS CURVE APPROX 1 1/2' INTO
 MY LANE. I SLOWED AND MOVED TO MY RIGHT
 AS FAR AS I COULD GO. THE OTHER CAR WENT
 BACK INTO THE W/B LANE AS HE PASSED. THERE WAS
 A MALE DRIVER AND A FEMALE PASSENGER. AS
 I CONTINUED E/B AND CAME AROUND THIS CURVE
 I SAW THE POLICE CAR W/B ON THE RIGHT SHOULDER
 WITH A LOT OF DUST. AS IT CAME OFF THE SHOULDER

AREA'S NAME AND NUMBER

DATE

REVIEWER'S NAME

DATE

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DATE OF INCIDENT/OCCURRENCE [REDACTED]-92	TIME (2400) [REDACTED]	NCIC NUMBER [REDACTED]	OFFICER I.D. NUMBER [REDACTED]	NUMBER [REDACTED]
<input checked="" type="checkbox"/> Narrative <input type="checkbox"/> Supplemental		<input checked="" type="checkbox"/> Collision report <input type="checkbox"/> Other:		<input type="checkbox"/> BA update <input type="checkbox"/> Hazardous materials
<input type="checkbox"/> Fatal <input type="checkbox"/> School bus		<input type="checkbox"/> Hit and run update <input type="checkbox"/> Other:		
CITY/COUNTY/JUDICIAL DISTRICT				REPORTING DISTRICT/BEAT
CITATION NUMBER				
STATE HIGHWAY RELATED				
<input type="checkbox"/> Yes <input type="checkbox"/> No				

STATEMENTS (WITNESSES)

IT WENT SIDEWAYS ACROSS THE ROAD AND OVER THE EMBANKMENT. I SAW THE TREES SHAKE AND PARTS FLEW ALL OVER. AFTER THAT WE WENT FOR HELP AND RETURNED.

Q. HOW FAR AHEAD OF YOU DID THE PATROL UNIT CROSS AS IT WAS GOING OVER THIS SIDE?

A ABOUT 50'.

UNABLE TO OBTAIN STATEMENT FROM P-1 AT THIS TIME DUE TO SEVERE INJURY SUSTAINED.

PREPARED BY NAME AND I.D. NUMBER [REDACTED]	REVIEWER'S NAME [REDACTED]	DATE [REDACTED]
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STATE OF CALIFORNIA

NARRATIVE/SUPPLEMENTAL

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DATE OF INCIDENT/OCCURRENCE [REDACTED]-92	TIME (2400) [REDACTED]	NOI# NUMBER [REDACTED]	OFFICER I.D. NUMBER [REDACTED]	NUMBER [REDACTED]
TYPE <input type="checkbox"/> Narrative <input checked="" type="checkbox"/> Supplemental		TYPE SUPPLEMENTAL (X APPLICABLE) <input type="checkbox"/> BA update <input type="checkbox"/> Fatal <input type="checkbox"/> Hazardous materials <input type="checkbox"/> School bus		<input type="checkbox"/> Hit and run update <input type="checkbox"/> Other:
CITY/COUNTY/JUDICIAL DISTRICT [REDACTED]			REPORTING DISTRICT/BEAT [REDACTED]	CITATION NUMBER [REDACTED]
ACTION/SUBJECT SR [REDACTED] 2 MI. E. [REDACTED]			STATE HIGHWAY RELATED <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

STATEMENTS

2. STATEMENT OF WITNESSES [REDACTED] (41) OF [REDACTED] PH# [REDACTED] AND [REDACTED] OF [REDACTED] PH# [REDACTED].

WITNESSES STATED THEY WERE W/R SR [REDACTED] EAST OF [REDACTED] STATION ABOUT [REDACTED] PM ON [REDACTED]-92 WHEN THEY SAW A WHITE VEH CLOSING FAST ON THEM FROM BEHIND. AS THEY MADE A LEFT TURN INTO [REDACTED] STATION, THEY SAW A HIGHWAY PATROL UNIT DRIVING SLOW THROUGH THE PARKING AREA IN FRONT OF [REDACTED] STATION. JUST ABOUT THIS TIME THE WHITE CAR WENT BY W/R AT A HIGH SPEED, APPROX 25 MPH. THE HIGHWAY PATROL UNIT THEN MADE A U-TURN AND TURNED ON EMERGENCY LIGHTS AND CHASED AFTER THE WHITE CAR W/R ON HWY [REDACTED]. WITNESSES WERE NOT ABLE TO ID. THE SPEEDING VEH. OTHER THAN A WHITE CAR.

THESE WITNESSES WERE CONTACTED BY WRITER DURING A.I. FOLLOW-UP [REDACTED]-92 AT [REDACTED] STATION.

PREPARED BY NAME AND I.D. NUMBER

REVIEWER'S NAME

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DATE OF INCIDENT/OCCURRENCE 9-2		TIME (2400) [REDACTED]	REPORT NUMBER [REDACTED]	OFFICER ID NUMBER [REDACTED]	NUMBER [REDACTED]
<input type="checkbox"/> Narrative <input type="checkbox"/> Supplemental		<input checked="" type="checkbox"/> Collision report <input type="checkbox"/> Other:		TYPE SUPPLEMENTAL (IF APPLICABLE) <input type="checkbox"/> BA update <input type="checkbox"/> Fatal <input type="checkbox"/> Hazardous materials <input type="checkbox"/> School bus	
CITY/COUNTY/JUDICIAL DISTRICT				REPORTING DISTRICT/BEAT	CITATION NUMBER
LOCATION/SUBJECT				STATE HIGHWAY RELATED <input type="checkbox"/> Yes <input type="checkbox"/> No	

OPINIONS AND CONCLUSIONS

IT IS APPARENT THROUGH PHYSICAL EVIDENCE AND INDEPENDENT WITNESS STATEMENTS THAT P.I. WAS E/B SR. LEAVING THE PARKING LOT OF [REDACTED] STATION WHEN HE OBSERVED A SPEEDING W/B VEHICLE DESCRIBED AS A LIGHT COLORED FULL SIZED VEHICLE. SEEING THIS P.I. MADE A U-TURN, ACTIVATED HIS EMERGENCY LIGHTS AND PROCEEDED W/B SR. IN AN ATTEMPT TO APPREHEND ERRANT DRIVER. — P.I. CONTINUING W/B SR. AT A HIGH RATE OF SPEED ENTERED A SWEEPING LEFT CURVE ON A DOWN GRADE. P.I. DRIFTED UPON THE RIGHT SHOULDER, OVERCORRECTED AND LOST CONTROL. — P.I. CROSSED THE E/B LANE IN FRONT OF WITNESSES [REDACTED] AND CONTINUED ACROSS SOUTH SHOULDER AREA AND DOWN SAID EMBANKMENT. IN GOING DOWN EMBANKMENT V-1 STRUCK A CEDAR SNAG AND SEVERAL CEDAR TREES CAUSING TOTAL DAMAGE TO V-1.

POINT OF IMPACT. — APPROX. 2.75 MILES EAST OF [REDACTED] AND APPROX 30' SOUTH OF THE SOUTH ROAD EDGE OF SR. — ESTABLISHED BY PHYSICAL EVIDENCE

THE ONLY DESCRIPTION OF THE VEHICLE P.I. WAS TRYING TO OVERTAKE IS A LIGHT COLORED FULL SIZED VEHICLE, WITH A MALE DRIVER AND POSSIBLY A FEMALE PASSENGER.

PREPARED BY NAME AND ID NUMBER [REDACTED]	DATE 9-2	REVIEWER'S NAME [REDACTED]	DATE [REDACTED]
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TEL: [REDACTED]

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DATE OF INCIDENT/OCCURRENCE [REDACTED] .92	TIME (MDD) [REDACTED]	NCIC NUMBER [REDACTED]	OFFICER NO. NUMBER [REDACTED]	NUMBER [REDACTED]
<input checked="" type="checkbox"/> ONE Narrative <input type="checkbox"/> Supplemental	<input checked="" type="checkbox"/> ONE Collision report <input type="checkbox"/> Other:	TYPE SUPPLEMENTAL (X APPLICABLE) <input type="checkbox"/> BA update <input type="checkbox"/> Hazardous materials <input type="checkbox"/> Fatal <input type="checkbox"/> School bus <input type="checkbox"/> Hit and run update <input type="checkbox"/> Other:		
CITY/COUNTY/JUDICIAL DISTRICT				REPORTING DISTRICT/STATE [REDACTED]
CITATION NUMBER				STATE HIGHWAY RELATED <input type="checkbox"/> Yes <input type="checkbox"/> No

OPINIONS AND CONCLUSIONS CONTRECOMMENDATIONS

NONE

PREPARED BY NAME AND OLD NUMBER

DATE

REVIEWER'S NAME

DATE

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90 57541

TEL:

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DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
KID-SPEED INFORMATION

ACCIDENT NUMBER 92-92		ACCIDENT LOCATION SR		ACCIDENT DATE 92		TEST DATE 92	
ROAD CONDITIONS ASPHALT GOOD GRADE W/B		ACCIDENT SKID DATA				CENTRIFUGAL SKID	
		SPENDING		LOCKED WHEEL		TOTAL	
		L.F.				LENGTH 50+	
		R.F.				CHORD 50	
		L.R.				MID-ORDINATE 6 1/2 IN. = .54F	
		R.R.					
		ACCIDENT VEHICLE (year, make, model)				AVERAGE THIS	

TEST SKID INFORMATION								OTHER DATA		
MPH	L.F.	R.F.	L.R.	R.R.	LONGEST	DETECTOR DISTANCE	DRIVER	I.D. NUMBER		
							VEHICLE LIC. OR EQUIP. NO.	MAKE	YEAR/MODEL	
							ACTUAL SPEED	DATE CALIBRATED	RACER SPEED	
METHOD SKIDMARKS MEASURED							WEATHER (temp.)		TIME	
<input checked="" type="checkbox"/> TAPE <input type="checkbox"/> RELATIVE <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> TAPE <input type="checkbox"/> RELATIVE <input type="checkbox"/> OTHER							ACCIDENT		TEST	
INVESTIGATING OFFICER-ACCIDENT							I.D. NUMBER		MINIMUM SPEED FROM CHART (feet)	
I.D. NUMBER							COEF. OF FRICTION		I.D. NUMBER	

DRAG SLED DATA					
WEIGHT 38LBS	FULL WEIGHT 27LBS	FORMULA 1 - FULL WT. SLED WT.	CALCULATED COEF. .71	ADJUSTMENT VALUE LESS 10%	ADJUSTED COEFFICIENT .63

CALCULATIONS/DIAGRAM

$$R = \frac{C^2}{8m} + \frac{m}{2}$$

$$\frac{2500}{8(.54)} + \frac{54}{2}$$

$$\frac{2500}{4.32} + .07$$

$$578.70 + .07$$

$$R = 578.97$$

$$V = \sqrt{15 R f}$$

$$\sqrt{15(578.97) .63}$$

$$\sqrt{5471.26}$$

$$V = 73.96$$

INVOLVED MAJOR INJURY SOLO T.C., SR EAST STATION.

SYMBOLS		FORMULAS		EXAMPLE: CENTRIFUGAL SKIDMARK
f - COEFFICIENT OF FRICTION	C - CHORD (FT)	$f = \frac{v^2}{250d}$	$R = \frac{C^2}{8m} + \frac{m}{2}$	
v - SPEED (MPH)	m - MID-ORDINATE	$v = \sqrt{250fd}$	$v = \sqrt{15Rf}$	
d - SKID LENGTH (FT)	R - RADIUS (FT)			

TEL:

DATE OF COLLISION

TIME

NCIC
NUMBER

OFFICER
I.D.

NUMBER (Pg 4)

DAY

YR. 92

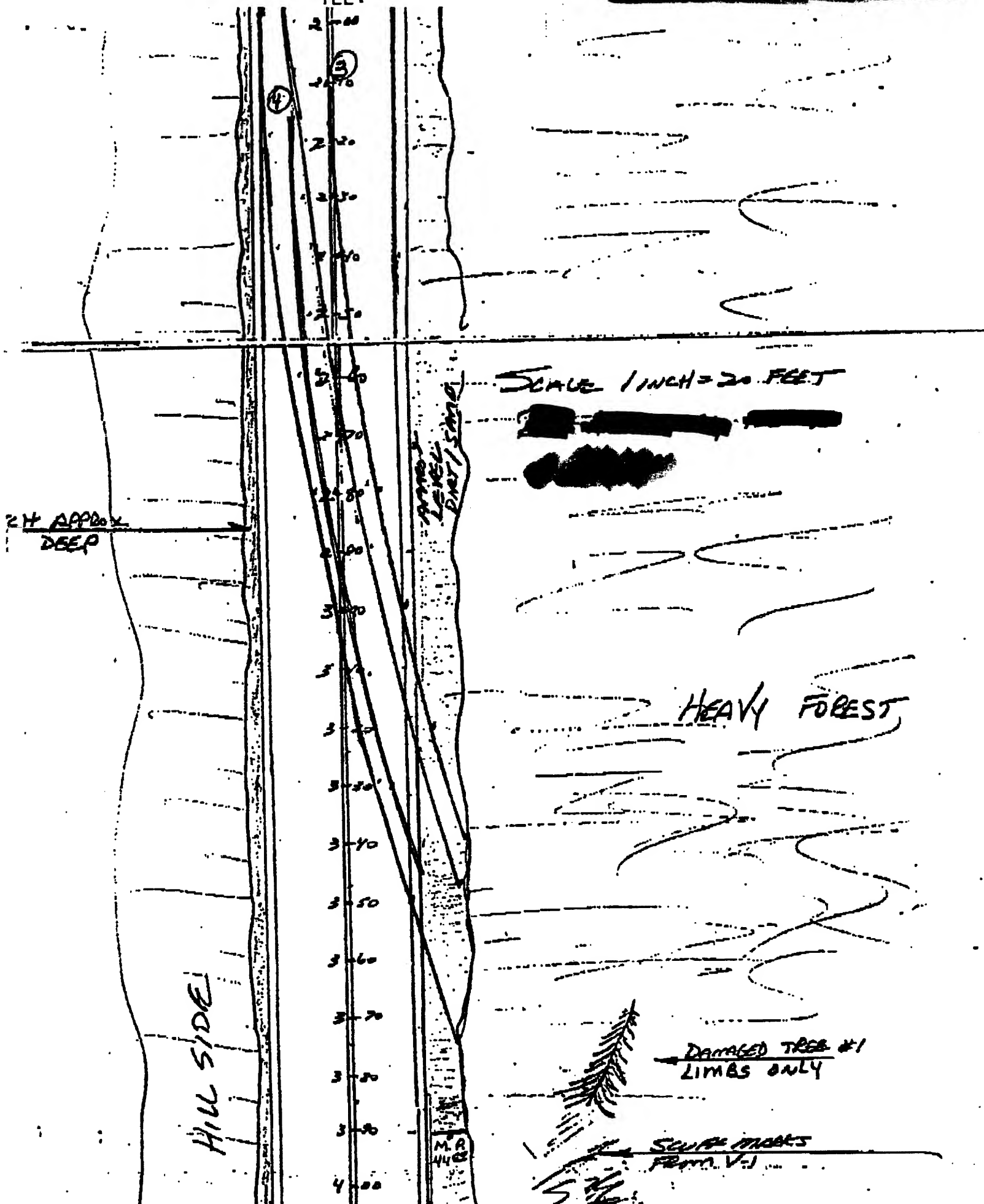
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HILL SIDE

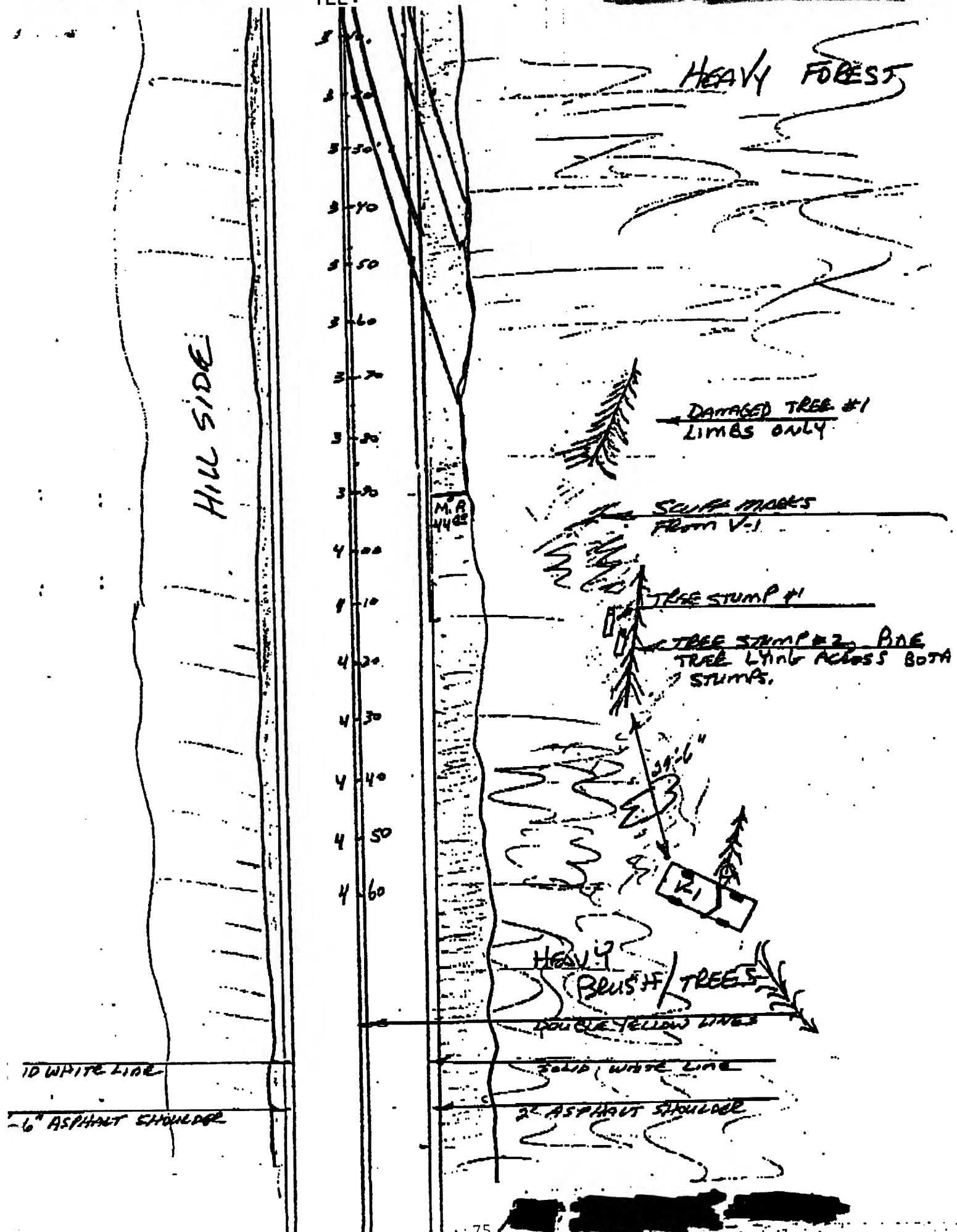
PINE / CEDAR TREES
AND BRUSH.

73 STEEP EMBANKMENT

TEL:



TEL:



APPENDIX B

Air Bag Supplement

ACCIDENT SUMMARY

ACCIDENT DATE ~~1/92~~ / 92

POLICE INVESTIGATED (1,2,9)*

~~_____~~ HIGHWAY PATROL

City ~~_____~~ County ~~_____~~

GENERAL LOCALITY

- (1) Freeway, Limited Access
- (2) Urban (City)
- (3) Urban-Rural (mixed)
- (4) Rural, Fields

CONFIGURATION (First Harm)

- (0) Struck Object or Pedestrian
- (1) Rear-End *Delinquent*
- (2) Head-On
- (3) Rear-to-Rear
- (4) Angle
- (5) Sideswipe-Same Direction
- (6) Sideswipe-Opposite Direct.
- (7) NonColl:eg Fell from Veh
- (8) NonImpact Deployment
- (9) Unknown

FIRE INVOLVED (0) None

- (1) AirBag Vehicle
- (2) Other Vehicle
- (3) Both Vehicles
- (9) Unknown

NUMBER: VEHICLES INVOLVED

(8)=8 or more

PERSONS INVOLVED

INJURED PERSONS

MAXIMUM AIS IN ACCIDENT

OTHER VEHICLE: MAXIMUM AIS

PRIME/DEPLOY IMPACT w AB VEH:
EVENT NUMBER

CDC ~~_____~~ *N/A*

TOTAL DELTA-V

Model Year, Make, Model, Body Type:

AIRBAG VEHICLE INSPECTION

DATE VEH. INSPECTED ~~_____~~ / 92

REASON VEHICLE NOT INSPECTED

- (0) Not Required
- (1) Inspection Completed
- (2) Cannot be Located**
- (3) Repaired or Destroyed**
- (5) Refual or Impounded**
- (7) Other*

**Specify: _____

IMPACT DATA OBTAINED

- (0) No Data Obtained
- (1) CDC Only
- (2) Crush Profile Only
- (3) Trajectory Data Only
- (4) CDC and Crush Profile
- (5) CDC and Trajectory
- (6) Crush and Trajectory
- (7) CDC, Crush & Trajectory

BASIS OF DELTA-V

- (0) Not Computed (Unknown Why)
- (1) CRASH - Damage Only
- (2) CRASH - Damage+Trajectory
- (3) Missing Vehicle Algorithm
- (4) Yielding Object Algorithm
- (5) Unknown Basis
- (6) One Vehicle Beyond Scope
- (7) Collision Beyond Scope
- (8) Insufficient Data

VEHICLE HISTORY

HAS AIRBAG VEHICLE BEEN IN
ANY PRIOR IMPACTS (1,2,9)*

HAS ANY PRIOR MAINTENANCE/SERVICE
BEEN PERFORMED ON SYSTEM(1,2,9)*

*Describe: _____

AIRBAG VEHICLE: FLEET *POUCE*

VIN *2EAC P 2 2 G 5 M X*

MILEAGE *26,919*

SYSTEM READINESS LAMP
(In Instrument Cluster)

PRE-IMPACT LAMP CONDITION

- (1) Functioning/ProvedOut
- (2) Inoperative
- (9) Unknown

DRIVER'S REPORT OF
PRE-IMPACT FLASHING

- (00) No Flashing Reported
- (01) Continuous Flashing
- (02) -- >Number of Flashes
- (11)
- (12) Constant Light
- (19) Flashing, Unkn Number
- (88) Not App (system removed)
- (99) Unknown

PERIOD OF PRE-IMPACT FLASHING

- (0) No Flashing
- (1) Same Day as Impact
- (2) Prior Day
- (3) Prior Two Days
- (4) Prior Week
- (5) Prior Month
- (6) Over One Month
- (9) Unknown

POST-IMPACT LAMP CONDITION

- (1) Functioning/ProvedOut
- (2) Inoperative
- (9) Unknown

POST-IMPACT FLASHING

- (00) No Flashing
- (01) Continuous Flashing
- (02) -- >Number of Flashes
- (11)
- (12) Constant Light
- (19) Flashing, Unkn Number
- (88) Not Appl (removed)
- (99) Unknown *INOPERATIVE*

AIRBAG VEHICLE
FIRST HARMFUL EVENT

33

- (01) Fire or explosion
- (02) Immersion
- (03) Gas Inhalation
- (04) Fell from vehicle
- (05) Injured in vehicle
- (06) Other noncollision (specify):
- (07) Overturn
- (08) Jackknife with intraunit damage
Collision With:
- (09) Pedestrian
- (10) Pedalcyclist
- (11) Railway train
- (12) Animal
- (13) Motor vehicle in transport (same roadway)
- (14) Motor vehicle in transport (other roadway)
- (15) Parked motor vehicle
- (16) Other type nonmotorist (specify):
- (17) Thrown or falling object
- (18) Boulder
- Collision with Fixed Object:
- (20) Building
- (21) Impact attenuator/Crash Cushion
- (22) Bridge pier or abutment
- (23) Bridge parapet end
- (24) Bridge rail
- (25) Guardrail
- (26) Concrete traffic barrier
- (27) Median barrier
- (28) Other longitudinal barrier (specify):
- (29) Highway/Traffic sign post
- (30) Overhead sign support
- (31) Luminaire/Light support
- (32) Utility pole
- (33) Other post, pole, or support (specify): *DELINEATOR*
- (34) Culvert
- (35) Curb
- (36) Ditch
- (37) Embankment-earth
- (38) Embankment-rock, stone or concrete
- (39) Fence (wooden, wire, chain link, etc.)
- (40) Wall (stone, rock, metal, etc.)
- (41) Fire hydrant
- (42) Shrubbery
- (43) Tree
- (44) Other fixed object (specify):
- (45) Pavement surface irregularity (pothole, grooved, grates)
- (99) Unknown

AIRBAG VEHICLE IMPACT SUMMARY

VEHICLE ROLE

- (0) Non-collision
 (1) Striking Unit
 (2) Struck Unit
 (3) Both Striking and Struck
 (9) Unknown

MANNER OF LEAVING SCENE

- (1) Driven
 (2) Towed-due to damage
 (3) Towed - not for damage
 (4) Towed - details unknown
 (5) Abandoned
 (9) Unknown

NUMBER OF IMPACT EVENTS

- (8) 8 or more, (9) Unknown

- ROLLOVER (0) No Rollover
 (1) First Event
 (2) Subsequent Event
 (3) Yes, Unknown Event
 (9) Unknown

OVERRIDE/UNDERRIDE

- (1) No over/underride
 (1) Override - 1st CDC
 (3) - Other CDC
 (4) Underride - 1st CDC
 (6) - Other CDC
 (9) Unknown

AIRBAG VEHICLE DAMAGE

- CODES: (1) Yes, DAMAGED
 (2) No Damage
 (9) Unknown

LEFT FRONT FENDER DAMAGE

RIGHT FRONT FENDER DAMAGE

CENTER TOP OF GRILLE DAMAGE

FRONT BUMPER E.A. STATUS: Left

- (1) Normal Right
 (2) Extended
 (3) Partial Compression
 (4) Complete Compression
 (5) Not Applicable
 (9) Unknown

FIRST AIRBAG VEHICLE IMPACT:

CONFIGURATION

- (0) Struck Object or Pedestrian
 (1) Rear-End
 (2) Head-On
 (3) Rear-to-Rear
 (4) Angle
 (5) Sideswipe - Same Direction
 (6) Sideswipe-Opposite Direct.
 (7) NonCollision Fell from Veh
 (8) NonImpact Deployment
 (9) Unknown

CDC 02 - R F E N - 1

OBJECT CONTACTED: DELMATEOR

PRIMARY/DEPLOYMENT IMPACT:

EVENT NUMBER

TOTAL DELTA-V

LONGITUDINAL DELTA-V

CONFIGURATION

- (0) Struck Object or Pedestrian
 (1) Rear-End
 (2) Head-On
 (3) Rear-to-Rear
 (4) Angle
 (5) Sideswipe - Same Direction
 (6) Sideswipe-Opposite Direct.
 (7) NonCollision Fell from Veh
 (8) NonImpact Deployment
 (9) Unknown

CDC ---

OBJECT CONTACTED: TREE

NOTES:

AIR BAG DEPLOYED DURING CRASH,
 SPECIFIC EVENT WAS UNKNOWN

SYSTEM DAMAGE

AIRBAG SUPPLEMENT AB-4

AIRBAG SYSTEM DAMAGE

CODES: (1) Yes, Damaged*
(2) No, Intact
(8) Not App.(Removed)
(9) Unknown

AIRBAG MODULE

SENSORS: Left Front

Center Front

Right Front

Rear, Cowl

DIAGNOSTIC MODULE

WIRING

KNEE DIVERter

INDICATION OF DISCONNECTED
OR LOOSE ELECTRICAL
CONNECTORS

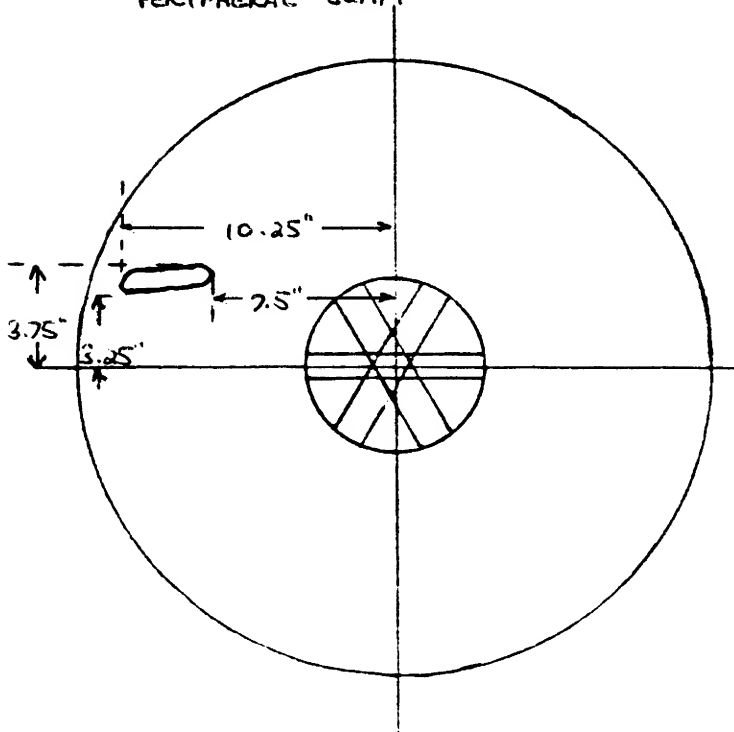
CONDITION OF DEPLOYED BAG

(1) Bag Intact
(2) Split or Torn*
(3) Cut by Object in Impact*
(4) Cut after Accident*
(5) Other (e.g., burned)*
(8) N/A (not deployed)
(9) Unknown

*DESCRIBE System and Bag Damage:

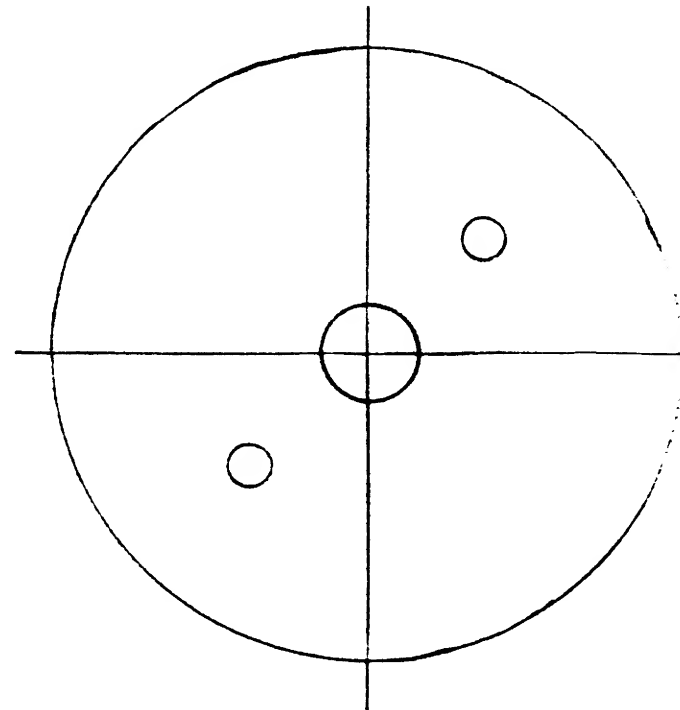
NOTE DAMAGE AND CONTACT MARKS ON AIRBAG DIAGRAMS BELOW:

BURN ON FACE OF BAG
1.75-4.0" INBOARD OF
PERIPHERAL SEAM



FRONT

TOP



BOTTOM

OCCUPANTS/DRIVER

AIRBAG SUPPLEMENT AB-5

OCCUPANTS of AIRBAG CAR

NUMBER OF OCCUPANTS IN VEHICLE 1
 (8) 8 or more
 NUMBER OF INJURED PERSONS 1
 MAXIMUM AIS IN AIRBAG VEHICLE 4
 (0) No Injury
 (1-6) AIS Severity
 (7) Injured, Unknown Severity
 (9) Unknown

NOTES:

DRIVER AGE 54 SEX MALE

NUMBER OF DRIVER INJURIES 14

SOURCE OF BEST INJURY DATA 2

- (0) Not Injured
 (1) Autopsy w/wo med. records
 (2) Hospital Medical Records
 (3) Emergency Room only
 (4) Private physician, Clinic
 (5) Lay Coroner Report
 (6) EMS Personnel
 (7) Interviewee
 (8) Police
 (9) Unknown
-

MAXIMUM AIS BY BODY REGION

REGION	MAX AIS	CONTACT
Head/Neck/Face	<u>3</u>	<u>53</u>
Chest	<u>4</u>	<u>33</u>
Abdomen	---	---
Leg/Hips	---	---
Other (Arms)	<u>3</u>	<u>45</u>
DRIVER MAXIMUM	<u>4</u>	<u>33</u>

EJECTION: Extent NONE

Portal N/A

DRIVER BELT USAGE: (1) Used (2) Not Used (9) Unknown 1

Evidence: POLICE REPORT / WITNESS STATEMENTS, ABRASIONS ON INSIDE
PLASTIC SURFACE OF LATCHPLATE FROM BELT LOADING, BLOOD STAINS ON
UPPER BELT

DRIVER POSTURE: Any Comments Recorded (1) Yes, (2) No 1

Describe driver's posture and position on seat including specific comments on head, torso, buttocks, legs and feet. Also note hand and arm position. Did driver brace before crash? Describe:

NORMAL SEATED POSITION PRE-CRASH, PROBABLY OUT OF POSITION
DUE TO CCW ROTATION AND INITIAL TREE IMPACTS

DRIVER FOREIGN OBJECTS: Comments Recorded (1) Yes, (2) No 2

Was driver wearing contact lenses or eyeglasses? Or holding any foreign object at the time of the impact (packages on lap, pipe, food, bottle, cigarette, etc.)? Did any lenses, objects, or jewelry play any role?:

DRIVER COMMENTS: Comments Recorded (1) Yes, (2) No 2

Was the driver aware that the vehicle was equipped with a supplemental restraint system? Did driver offer any comments on smoke, noise, etc.? Did the driver comment on the airbag as a restraint system? Describe:

UNCONSCIOUS FOLLOWING IMPACT WITH AMNESIA, DRIVER DOESN'T
REMEMBER THE DAY OF THE CRASH

PASSENGER-AIRBAG CONTACT (1) Yes, (2) No, (9) Unknown 2

Describe: NO PASSENGER

APPENDIX C

NASS Vehicle Forms



GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

VEHICLE IDENTIFICATION

4. Vehicle Model Year

Code the last two digits of the model year
(99) Unknown

5. Vehicle Make (specify):

FORD
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(99) Unknown

6. Vehicle Model (specify):

LTD CROWN VICTORIA POLICE VEHICLE
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(999) Unknown

7. Body Type

Note: Applicable codes may be found on
the back of this page.

8. Vehicle Identification Number

2FACD72G5MX

Left justify; Slash zeros and letter Z (0 and Z)
No VIN—Code all zeros
Unknown—Code all nine's

OFFICIAL RECORDS

9. Police Reported Vehicle Disposition

(0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

10. Police Reported Travel Speed

Code to the nearest mph (NOTE: 00 means
less than 0.5 mph)
(97) 96.5 mph and above
(99) Unknown

11. Police Reported Alcohol Presence

(0) No alcohol present
(1) Yes (alcohol present)
(7) Not reported
(8) No driver present
(9) Unknown

Note: See variables 37 through 55
(Page 4) for information on Other Drugs

12. Alcohol Test Result For Driver

Code actual value (decimal implied
before first digit—0.xx)
(95) Test refused
(96) None given
(97) AC test performed, results unknown
(98) No driver present
(99) Unknown

Source:

ACCIDENT RELATED

13. Speed Limit

(00) No statutory limit
Code posted or statutory speed limit
(99) Unknown

14. Attempted Avoidance Maneuver

(00) No impact
(01) No avoidance actions
(02) Braking (no lockup)
(03) Braking (lockup)
(04) Braking (lockup unknown)
(05) Releasing brakes
(06) Steering left
(07) Steering right
(08) Braking and steering left
(09) Braking and steering right
(10) Accelerating
(11) Accelerating and steering left
(12) Accelerating and steering right
(97) No driver present
(98) Other action (specify):

(99) Unknown

15. Accident Type

Applicable codes may be found on the
back of page two of this field form
(00) No impact
Code the number of the diagram that
best describes the accident circumstance
(98) Other accident type (specify):

(99) Unknown

**** SKIP TO VARIABLE GV37 IF GV07 DOES NOT EQUAL 01-49 ****

CODES FOR BODY TYPE

CDS APPLICABLE VEHICLES

Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify):

(09) Unknown automobile type

Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

Utility Vehicles ($\leq 10,000$ lbs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravado, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Landcruiser, Rover, Scout)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

Van Based Light Trucks ($\leq 10,000$ lbs GVWR)

- (20) Minivan (Chrysler Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Dodge/Plymouth Vista, Aerostar, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Mitsubishi Minivan, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ($\leq 10,000$ lbs GVWR)
- (23) Van based motorhome ($\leq 10,000$ lbs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify):

(29) Unknown van type

Light Conventional Trucks (Pickup style cab, $\leq 10,000$ lbs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500,)
- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

Other Light Trucks ($\leq 10,000$ lbs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

OTHER VEHICLES

Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):
- (59) Unknown bus type

Medium/Heavy Trucks ($> 10,000$ lbs GVWR)

- (60) Step van ($> 10,000$ lbs GVWR)
- (61) Single unit straight truck ($10,000$ lbs $<$ GVWR $\leq 19,500$ lbs)
- (62) Single unit straight truck ($19,500$ lbs $<$ GVWR $\leq 26,000$ lbs)
- (63) Single unit straight truck ($> 26,000$ lbs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify):
- (89) Unknown motored cycle type

Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

OCCUPANT RELATED

16. Driver Presence in Vehicle 1
 (0) Driver not present
 (1) Driver present
 (9) Unknown
17. Number of Occupants This Vehicle 01
 (00-96) Code actual number of occupants for this vehicle
 (97) 97 or more
 (99) Unknown
18. Number of Occupant Forms Submitted 01

VEHICLE WEIGHT ITEMS

19. Vehicle Curb Weight 03800
3822 Code weight to nearest 100 pounds.
 (010) Less than 1050 pounds
 (135) 13,500 pounds or more
 (999) Unknown
 Source: _____
20. Vehicle Cargo Weight 0100
100 Code weight to nearest 100 pounds. *Police package/equipment*
 (00) Less than 50 pounds
 (97) 9,650 pounds or more
 (99) Unknown

RECONSTRUCTION DATA

21. Towed Trailing Unit 0
 (0) No towed unit
 (1) Yes—towed trailing unit
 (9) Unknown
22. Documentation of Trajectory Data for This Vehicle 1
 (0) No
 (1) Yes
23. Post Collision Condition of Tree or Pole (For Highest Delta V) 2
 (0) Not collision (for highest delta V) with tree or pole
 (1) Not damaged
 (2) Cracked/sheared
 (3) Tilted < 45 degrees
 (4) Tilted ≥ 45 degrees
 (5) Uprooted tree
 (6) Separated pole from base
 (7) Pole replaced
 (8) Other (specify): _____
 (9) Unknown

24. Rollover 0
 (0) No rollover (no overturning)
Rollover (primarily about the longitudinal axis)
 (1) Rollover, 1 quarter turn only
 (2) Rollover, 2 quarter turns
 (3) Rollover, 3 quarter turns
 (4) Rollover, 4 or more quarter turns (specify): _____

- (5) Rollover--end-over-end (i.e., primarily about the lateral axis)
 (9) Rollover (overturn), details unknown

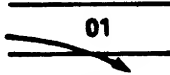

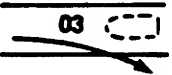
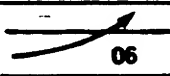
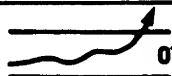

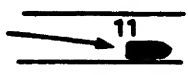


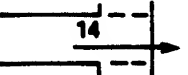
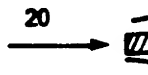
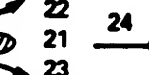

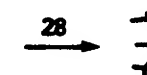
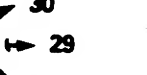

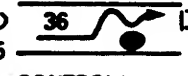
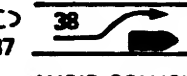
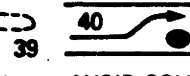

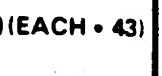
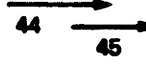
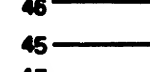
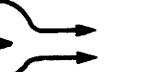
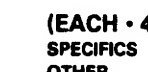



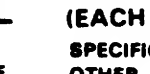






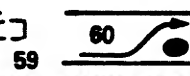
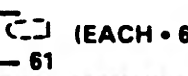
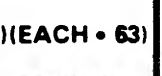


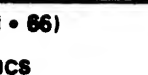
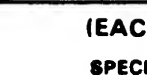
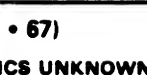


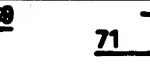
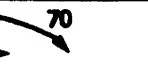



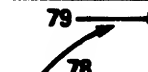

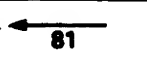


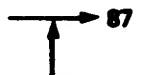


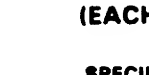
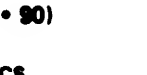
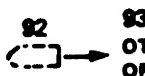




OVERRIDE/UNDERRIDE (THIS VEHICLE)

25. Front Override/Underride (this Vehicle) 0
26. Rear Override/Underride (this Vehicle) 0
 (0) No override/underride, or not an end-to-end impact
Override (see specific CDC)
 (1) 1st CDC
 (2) 2nd CDC
 (3) Other not automated CDC (specify): _____
Underride (see specific CDC)
 (4) 1st CDC
 (5) 2nd CDC
 (6) Other not automated CDC (specify): _____
 (7) Medium/heavy truck or bus override
 (9) Unknown

HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value
 (997) Noncollision
 (998) Impact with object
 (999) Unknown

27. Heading Angle For This Vehicle 998
28. Heading Angle For Other Vehicle 998

Category	Configuration	ACCIDENT TYPES (Includes Intent)							
I. Single Driver	A. Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN			
	B. Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN			
	C. Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN		
II. Same Trafficway Same Direction	D. Rear-End	 20 STOPPED 21, 22, 23	 22 SLOWER 25, 26, 27	 24 DECEL. 29, 30, 31	 26 AVOID COLLISION WITH VEH.	 28 AVOID COLLISION WITH OBJECT	(EACH • 32) SPECIFICS OTHER	(EACH • 33) SPECIFICS UNKNOWN	
	E. Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	 42 SPECIFICS OTHER	 44 SPECIFICS UNKNOWN	(EACH • 42) SPECIFICS OTHER	(EACH • 43) SPECIFICS UNKNOWN
	F. Sideswipe Angle	 44 SIDESWIPE ANGLE	 46 SIDESWIPE ANGLE	 48 SIDESWIPE ANGLE	 50 SIDESWIPE ANGLE	 52 SIDESWIPE ANGLE	 54 SIDESWIPE ANGLE	(EACH • 48) SPECIFICS OTHER	(EACH • 49) SPECIFICS UNKNOWN
III. Same Trafficway Opposite Direction	G. Head-On	 50 LATERAL MOVE	 52 SPECIFICS OTHER	 54 SPECIFICS UNKNOWN	 56 SPECIFICS OTHER	 58 SPECIFICS UNKNOWN	(EACH • 52) SPECIFICS OTHER	(EACH • 53) SPECIFICS UNKNOWN	
	H. Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	 62 SPECIFICS OTHER	 64 SPECIFICS UNKNOWN	(EACH • 62) SPECIFICS OTHER	(EACH • 63) SPECIFICS UNKNOWN
	I. Sideswipe Angle	 64 LATERAL MOVE	 66 SPECIFICS OTHER	 68 SPECIFICS UNKNOWN	 70 SPECIFICS OTHER	 72 SPECIFICS UNKNOWN	 74 SPECIFICS OTHER	(EACH • 66) SPECIFICS OTHER	(EACH • 67) SPECIFICS UNKNOWN
IV. Change Trafficway Vehicle Turning	J. Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 70 INITIAL SAME DIRECTIONS	 72 SPECIFICS OTHER	 74 SPECIFICS UNKNOWN	 76 SPECIFICS OTHER	(EACH • 74) SPECIFICS OTHER	(EACH • 75) SPECIFICS UNKNOWN	
	K. Turn Into Path	 76 TURN INTO SAME DIRECTION	 78 TURN INTO OPPOSITE DIRECTIONS	 80 SPECIFICS OTHER	 82 SPECIFICS UNKNOWN	 84 SPECIFICS OTHER	 86 SPECIFICS UNKNOWN	(EACH • 84) SPECIFICS OTHER	(EACH • 85) SPECIFICS UNKNOWN
V. Intersecting Paths (Vehicle Damage)	L. Straight Paths	 86 SPECIFICS OTHER	 88 SPECIFICS UNKNOWN	 90 SPECIFICS OTHER	 92 SPECIFICS UNKNOWN	 94 SPECIFICS OTHER	(EACH • 90) SPECIFICS OTHER	(EACH • 91) SPECIFICS UNKNOWN	
VI. Miscellaneous	M. Backing Etc.	 92 BACKING VEH.	 94 OTHER VEH. OR OBJECT	 96 OTHER ACCIDENT TYPE	 98 UNKNOWN ACCIDENT TYPE	 100 NO IMPACT	98 Other Accident Type 99 Unknown Accident Type 00 No Impact		

29. Basis for Total Delta V (highest)

5*Delta V Calculated*

- (1) CRASH program—damage only routine
- (2) CRASH program—damage and trajectory routine
- (3) Missing vehicle algorithm

Delta V Not Calculated

- (4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
- (5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction technique, regardless of adequacy of damage data.
- (6) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

COMPUTER GENERATED DELTA V

30. Total Delta V

Secondary Highest

99

____ Nearest mph

(NOTE: 00 means less than
0.5 mph)
(97) 96.5 mph and above
(99) Unknown

31. Longitudinal Component of
Delta V+ 99

____ Nearest mph

(NOTE: __00 means greater than
-0.5 and less than +0.5 mph)
(±97) ±96.5 mph and above
(__99) Unknown

Secondary Highest

32. Lateral Component of Delta V

+ 99

____ Nearest mph

(NOTE: __00 means greater than
-0.5 and less than +0.5 mph)
(±97) ±96.5 mph and above
(__99) Unknown

33. Energy Absorption

999.900

____ Nearest 100 foot-lbs

(NOTE: 0000 means less than 50 foot-lbs)
(9997) 999,650 foot-lbs or more
(9999) Unknown

34. Confidence In Reconstruction Program
Results (For Highest Delta V)

- (0) No reconstruction 0
- (1) Collision fits model — results appear reasonable
- (2) Collision fits model — results appear high
- (3) Collision fits model — results appear low
- (4) Borderline reconstruction — results appear reasonable

35. Type of Vehicle Inspection

- (0) No inspection 1
- (1) Complete inspection
- (2) Partial inspection (specify):

36. Is this an AOPS Vehicle?

- (0) No 1
- (1) Yes

IS OLDMISS APPLICABLE FOR THIS VEHICLE? [] YES [] NO

IF YES: IS A COMPLETED OLDMISS PROGRAM SUMMARY INCLUDED? [] YES [] NO

37. Police Reported Other Drug Presence 1

- (0) No other drugs present
- (1) Yes (other drug present)
- (7) Not reported
- (8) No driver present
- (9) Unknown

38. Police Reported Observation/Perception Test Type For Driver 0

- (0) No observation/perception test given
- (1) Drug recognition technician (DRT) determination using DEC process
- (2) Behavioral
- (3) Other physical observation/perception determination (specify): _____

- (4) DEC process available, unknown if determination made
- (5) DEC process not available, unknown if other observation/perception test given
- (7) Other observation/perception test (specify): _____
- (8) No driver present

39. Other Drug Specimen Test Type For Driver 0

- (0) No specimen test given
- (1) Blood test
- (2) Urine test
- (3) Other specimen tests (specify): _____
- (7) Unspecified specimen test
- (8) No driver present
- (9) Unknown if specimen test given

DRUG EVALUATION CLASSIFICATION

OTHER DRUGS TEST RESULTS FOR DRIVER

	DEC Observation/ Perception Test Results	Specimen Test Results
Narcotic Drug	40. <u>0</u>	41. <u>0</u>
Depressant Drug	42. <u>0</u>	43. <u>0</u>
Stimulant Drug	44. <u>0</u>	45. <u>0</u>
Hallucinogen Drug	46. <u>0</u>	47. <u>0</u>
Cannabinoid Drug	48. <u>0</u>	49. <u>0</u>
Phencyclidine (PCP)	50. <u>0</u>	51. <u>0</u>
Inhalant Drug	52. <u>0</u>	53. <u>0</u>
Other Drug (Excluding Nicotine, Aspirin, Alcohol, Drugs Administered Post-Crash)	54. <u>0</u>	55. <u>0</u>

Codes For Observation/Perception Test Results

- (0) No DEC observation/perception test given
- (1) Passed DEC observation/perception test
- (2) Failed DEC observation/perception test
- (3) DEC observation/perception test given—
results unknown
- (8) No driver present
- (9) Unknown if DEC observation/perception
test given

Codes for Specimen Test Results

- (0) No specimen test given
- (1) Drug not found in specimen
- (2) Drug found in specimen
- (7) Specimen test given, results unknown or
not obtained
- (8) No driver present
- (9) Unknown if specimen test given

OTHER DATA**56. Driver's Zip Code**

- (00000) Driver not present
 (00001) Driver not a resident of U.S. or territories
 Code actual 5-digit zip code
 (99999) Unknown

57. Driver's Race/Ethnic Origin

- (0) Driver not present
 (1) White (non-Hispanic)
 (2) Black (non-Hispanic)
 (3) White (Hispanic)
 (4) Black (Hispanic)
 (5) American Indian, Eskimo or Aleut
 (6) Asian or Pacific Islander
 (8) Other (specify):
 (9) Unknown

58. Vehicle Special Use (This Trip)

- (0) No special use
 (1) Taxi
 (2) Vehicle used as school bus
 (3) Vehicle used as other bus
 (4) Military
 (5) Police
 (6) Ambulance
 (7) Hearse
 (8) Fire truck or car
 (9) Unknown

61. Rollover Initiation Object Contacted0 0**62. Location on Vehicle Where Initial Principal Tripping Force Is Applied**0

- (0) No rollover
 (1) Wheels/tires
 (2) Side plane
 (3) End plane
 (4) Undercarriage
 (5) Other location on vehicle (specify):
 (8) Non-contact rollover forces (specify):
 (9) Unknown

63. Direction of Initial Roll0

- (0) No rollover
 (1) Roll right - primarily about the longitudinal axis
 (2) Roll left - primarily about the longitudinal axis
 (5) End-over-end (i.e., primarily about the lateral axis)
 (9) Unknown roll direction

ROLLOVER DATA

If GV07 (Body Type) \neq 1-49, leave GV59-GV63 blank.
 If GV24 (Rollover) = 0, then GV59-GV63 must equal 0.
 If GV24 = 9, then GV59-GV63 must equal 9.

59. Rollover Initiation Type0

- (0) No rollover
 (1) Trip-over
 (2) Flip-over
 (3) Turn-over
 (4) Climb-over
 (5) Fall-over
 (6) Bounce-over
 (7) Collision with another vehicle
 (8) Other rollover initiation type specify):
 (9) Unknown rollover initiation type

60. Location of Rollover Initiation0

- (0) No rollover
 (1) On roadway
 (2) On shoulder—paved
 (3) On shoulder—unpaved
 (4) On roadside or divided trafficway median
 (9) Unknown

PRECRASH DATA**64. Pre-Event Movement (Prior to Recognition of Critical Event)**1 3

- (01) Going straight
 (02) Slowing or stopping in traffic lane
 (03) Starting in traffic lane
 (04) Stopped in traffic lane
 (05) Passing or overtaking another vehicle
 (06) Disabled or parked in travel lane
 (07) Leaving a parking position
 (08) Entering a parking position
 (09) Turning right
 (10) Turning left
 (11) Making a U-turn
 (12) Backing up (other than for parking position)
 (13) Negotiating a curve
 (14) Changing lanes
 (15) Merging
 (16) Successful avoidance maneuver to a previous critical event
 (97) Other (specify):
 (98) No driver present
 (99) Unknown

CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

- (00) No rollover
- (01-30) — Vehicle Number

Noncollision

- (31) Turn-over — fall-over
- (33) Jackknife

Collision With Fixed Object

- (41) Tree (\leq 4 inches in diameter)
- (42) Tree ($>$ 4 inches in diameter)
- (43) Shrubbery or bush
- (44) Embankment

- (45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post

- (50) Pole or post (\leq 4 inches in diameter)
- (51) Pole or post ($>$ 4 inches but \leq 12 inches in diameter)
- (52) Pole or post ($>$ 12 inches in diameter)
- (53) Pole or post (diameter unknown)
- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail)
(specify): _____

- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): _____

- (69) Unknown fixed object

Collision with Nonfixed Object

- (71) Motor vehicle not in-transport
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (88) Other nonfixed object (specify): _____

- (89) Unknown nonfixed object

- (98) Other event (specify): _____

- (99) Unknown event or object

PRECRASH DATA (Continued)

65. Critical Precrash Event

06*This Vehicle Loss of Control Due To:*

- (01) Blow out or flat tire
- (02) Stalled engine
- (03) Disabling vehicle failure (e.g., wheel fell off) (specify): _____
- (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): _____
- (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): _____
- (06) Traveling too fast for conditions
- (08) Other cause of control loss (specify): _____
- (09) Unknown cause of control loss

This Vehicle Traveling

- (10) Over the lane line on left side of travel lane
- (11) Over the lane line on right side of travel lane
- (12) Off the edge of the road on the left side
- (13) Off the edge of the road on the right side
- (14) End departure
- (15) Turning left at intersection
- (16) Turning right at intersection
- (17) Crossing over (passing through) intersection
- (19) Unknown travel direction

Other Motor Vehicle In Lane

- (50) Stopped
- (51) Traveling in same direction with lower speed (i.e., lower steady speed or decelerating)
- (52) Traveling in same direction with higher speed
- (53) Traveling in opposite direction
- (54) In crossover
- (55) Backing
- (59) Unknown travel direction of other motor vehicle in lane

Other Motor Vehicle Encroaching Into Lane

- (60) From adjacent lane (same direction)—over left lane line
- (61) From adjacent lane (same direction)—over right lane line
- (62) From opposite direction—over left lane line
- (63) From opposite direction—over right lane line
- (64) From parking lane
- (65) From crossing street, turning into same direction
- (66) From crossing street, across path
- (67) From crossing street, turning into opposite direction
- (68) From crossing street, intended path not known
- (70) From driveway, turning into same direction
- (71) From driveway, across path
- (72) From driveway, turning into opposite direction
- (73) From driveway, intended path not known
- (74) From entrance to limited access highway
- (78) Encroachment by other vehicle—details unknown

Pedestrian or Pedalcyclist, or Other Nonmotorist

- (80) Pedestrian in roadway
- (81) Pedestrian approaching roadway
- (82) Pedestrian - unknown location
- (83) Pedalcyclist or other nonmotorist in roadway (specify): _____
- (84) Pedalcyclist or other nonmotorist approaching roadway (specify): _____
- (85) Pedalcyclist or other nonmotorist—unknown location (specify): _____

Object or Animal

- (87) Animal in roadway
- (88) Animal approaching roadway
- (89) Animal—unknown location
- (90) Object in roadway
- (91) Object approaching roadway
- (92) Object—unknown location

(98) Other critical precrash event (specify): _____

(99) Unknown

For Corrective Actions Attempted see variable GV14
(Attempted Avoidance Manuever)

66. Precrash Stability After Avoidance Maneuver

4

- (0) No avoidance maneuver
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify): _____

(8) No driver present

(9) Precrash stability unknown

67. Precrash Directional Consequences of Avoidance Maneuver (Corrective Action)

4

- (0) No avoidance maneuver
- (1) Vehicle stayed in travel lane where avoidance maneuver was initiated
- (2) Vehicle stayed on roadway but left travel lane where avoidance maneuver was initiated
- (3) Vehicle stayed on roadway, not known if left travel lane where avoidance maneuver was initiated
- (4) Vehicle departed roadway
- (5) Avoidance maneuver initiated off roadway
- (8) No driver present
- (9) Directional consequences unknown

*** IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), ***
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

*** IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE ***
THE EXTERIOR VEHICLE, INTERIOR VEHICLE,
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

EXTERIOR VEHICLE FORM

**NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM**

Administration	Case Number
1. Primary Sampling Unit Number _____	3. Vehicle Number <u>01</u>
2. Case Number - Stratum <u>92-12</u>	

VEHICLE IDENTIFICATION

VIN 2 F A C P 7 2 G 5 M X [REDACTED] Model Year 9 1
Vehicle Make (specify): FORD Vehicle Model (specify): LTD CROWN VICTORIA

LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L
7	SEE NARRATIVE	

CRUSH PROFILE

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure and document on the vehicle diagram the location of maximum crush.

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

Use as many lines/columns as necessary to describe each damage profile.

[illegible]

VEHICLE DAMAGE SKETCH

TIRE—WHEEL DAMAGE a. Rotation physically restricted RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.	ORIGINAL SPECIFICATIONS Wheelbase <u>114.3"</u> Overall Length <u>211.0"</u> Maximum Width <u>72.5"</u> Curb Weight <u>3822</u> Average Track <u>62.75"</u> Front Overhang _____ Rear Overhang _____ Engine Size: cyl./displ. <u>8 cyl. / 5.8 liter</u> Undeformed End Width _____	WHEEL STEER ANGLES (For locked front wheels or displaced rear axles only) RF ± _____ ° LF ± _____ ° RR ± _____ ° LR ± _____ ° Within ± 5 degrees DRIVE WHEELS <input type="checkbox"/> FWD <input checked="" type="checkbox"/> RWD <input type="checkbox"/> 4WD Approximate Cargo Weight <u>100 lbs.</u> POLICE EQUIPMENT
TYPE OF TRANSMISSION <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic 4-SPEED		

FRONT VIEW

TREE IMPACT TO PUSH BUMPER

PUSH BUMPERS

62.2"

60"

FRONT END STROKE

R = 1.25"

L = 0.625"

Original Bumper height

63.3"

DELINEATOR IMPACT #1

TREE IMPACT #7

13" 64" 14"

DELINEATOR IMPACT #2, 8-19" REARWARD OF RF AXLE

TREE IMPACTS

60"

POST-CRASH

Bumper corner _____

Stringline _____

POST-CRASH

Bumper corner _____

Stringline _____

NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

CDC WORKSHEET

CODES FOR OBJECT CONTACTED

(01-30) — Vehicle Number

Noncollision

- (31) Overturn — rollover
 (32) Fire or explosion
 (33) Jackknife
 (34) Other intraunit damage (specify): _____

- (35) Noncollision injury
 (38) Other noncollision (specify): _____

- (39) Noncollision — details unknown

Collision With Fixed Object

- (41) Tree (≤ 4 inches in diameter)
 (42) Tree (> 4 inches in diameter)
 (43) Shrubbery or bush
 (44) Embankment
 (45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post

- (50) Pole or post (≤ 4 inches in diameter)
 (51) Pole or post (> 4 inches but ≤ 12 inches in diameter)
 (52) Pole or post (> 12 inches in diameter)
 (53) Pole or post (diameter unknown)
 (54) Concrete traffic barrier
 (55) Impact attenuator
 (56) Other traffic barrier (includes guardrail) (specify): _____

- (57) Fence
 (58) Wall
 (59) Building
 (60) Ditch or culvert
 (61) Ground
 (62) Fire hydrant
 (63) Curb
 (64) Bridge
 (68) Other fixed object (specify): _____

- (69) Unknown fixed object

Collision with Nonfixed Object

- (71) Motor vehicle not in-transport
 (72) Pedestrian
 (73) Cyclist or cycle
 (74) Other nonmotorist or conveyance

- (75) Vehicle occupant
 (76) Animal
 (77) Train
 (78) Trailer, disconnected in transport
 (88) Other nonfixed object (specify): _____

- (89) Unknown nonfixed object

- (98) Other event (specify): _____

- (99) Unknown event or object

DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	50	015	00	R	B	E	W	01
02	50	060	00	R	F	E	N	01
03	43	000	00	F	D	M	W	03
04	41	090	00	F	Z	L	S	01
05	42	000	00	R	F	E	N	03
06	41	000	00	R	F	E	N	02
07	42	000	00	R	P	A	N	05
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—

COLLISION DEFORMATION CLASSIFICATION

HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>07</u>	5. <u>42</u>	6. <u>00</u>	7. <u>R</u>	8. <u>P</u>	9. <u>A</u>	10. <u>N</u>	11. <u>05</u>

Second Highest Delta "V"

12. <u>05</u>	13. <u>42</u>	14. <u>00</u>	15. <u>R</u>	16. <u>F</u>	17. <u>E</u>	18. <u>N</u>	19. <u>03</u>
---------------	---------------	---------------	--------------	--------------	--------------	--------------	---------------

CRUSH PROFILE

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN INCHES.)

HIGHEST DELTA "V"

20. L	21. C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	22. ±D
SIDERAIL	CRUSH						
<u>054</u>	<u>16</u>	<u>31</u>	<u>33</u>	<u>13</u>	<u>---</u>	<u>---</u>	<u>+</u> <u>-</u>

~~Second~~ Highest Delta "V"

23. L	24. C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	25. ±D
BELTLINE	CRUSH						
<u>060</u>	<u>08</u>	<u>19</u>	<u>30</u>	<u>20</u>	<u>08</u>	<u>04</u>	<u>⊕</u> <u>-005</u>

26. Are CDCs Documented but Not Coded on The Automated File? 1
(0) No
(1) Yes

27. Researcher's Assessment of Vehicle Disposition 1
(0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

28. Original Wheelbase 114.3
114.3 Code to the nearest tenth of an inch
(9999) Unknown

29. Is This A Multi-Stage Manufactured Vehicle
And/Or A Certified Altered Vehicle?

0

- (0) No post manufacturer modifications
(1) Yes - post manufacturer modifications
(specify): _____

(Include photograph of CERTIFICATION
PLACARD in case report)

(9) Unknown if vehicle is modified

30. Fire Occurrence

0

(0) No fire

Yes, fire occurred

- (1) Minor
(2) Major
(9) Unknown

31. Origin of Fire

0

- (0) No fire
(1) Vehicle exterior (front, side, back, top)
(2) Exhaust system
(3) Fuel tank (and other fuel retention
system parts)
(4) Engine compartment
(5) Cargo/trunk compartment
(6) Instrument panel
(7) Passenger compartment area
(8) Other location (specify): _____

(9) Unknown

32. Type of Fuel Tank

1

- (0) No fuel tank (electrical vehicle)
(1) Metallic
(2) Non-metallic
(9) Unknown

*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED AND WAS NOT AN AOPS ***
(I.E., GV09=0 OR 9 AND GV36=0), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.



INTERIOR VEHICLE FORM

BEST AVAILABLE COPY

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

2. Case Number—Stratum

3. Vehicle Number

INTEGRITY

4. Passenger Compartment Integrity

(00) No integrity loss

Yes, Integrity Was Lost Through

(01) Windshield

(02) Door (side)

(03) Door/hatch (back door)

(04) Roof

(05) Roof glass

(06) Side window

(07) Rear window (backlight)

(08) Roof and roof glass

(09) Windshield and door (side)

(10) Windshield and roof

(11) Side and rear window (side window and backlight)

(12) Windshield and side window

(13) Door and side window

(18) Other combination of above (specify):

(99) Unknown

Door, Tailgate or Hatch Opening

5. LF 3 6. RF 3 7. LR 3 8. RR 3 9. TG/H 0

(0) No door/gate/hatch

(1) Door/gate/hatch remained closed and operational

(2) Door/gate/hatch came open during collision

(3) Door/gate/hatch jammed shut

(8) Other (specify):

(9) Unknown

Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09 ≠ 2, Then code 0

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

(0) No door/gate/hatch or door not opened

Door, Tailgate or Hatch Came Open During Collision

(1) Door operational (no damage)

(2) Latch/striker failure due to damage

(3) Hinge failure due to damage

(4) Door structure failure due to damage

(5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage

(6) Latch/striker and hinge failure due to damage

(8) Other failure (specify):

(9) Unknown

GLAZING

Glazing Damage from Impact Forces

15. WS 2 16. LF 6 17. RF 6 18. LR 0 19. RR 0

20. BL 6 21. Roof 3 22. Other 3

(0) No glazing damage from impact forces

(1) Glazing cracked or cracked from impact forces

(2) Glazing cracked and holed from impact forces

(3) Glazing cracked and holed from impact forces

(4) Glazing cracked and holed from impact forces

(5) Glazing cracked and holed from impact forces

(6) Glazing cracked and holed from impact forces

(7) Glazing cracked and holed from impact forces

(8) No glazing damage from impact forces

(9) Unknown if damaged

Glazing Damage from Occupant Contact

23. WS 0 24. LF 0 25. RF 0 26. LR 0 27. RR 0

28. BL 0 29. Roof 0 30. Other 0

(0) No occupant contact to glazing or no glazing

(1) Glazing contacted by occupant but no glazing damage

(2) Glazing in place and cracked by occupant contact

(3) Glazing in place and holed by occupant contact

(4) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact

(5) Glazing out-of-place by occupant contact and holed by occupant contact

(6) Glazing disintegrated by occupant contact

(9) Unknown if contacted by occupant

If No Glazing Damage And No Occupant Contact or No Glazing, Then Code IV31 Through IV46 As 0

Type of Window/Windshield Glazing

31. WS 1 32. LF 2 33. RF 2 34. LR 2 35. RR 2

36. BL 1 37. Roof 0 38. Other 0

(0) No glazing contact and no damage, or no glazing

(1) AS-1 — Laminated

(2) AS-2 — Tempered

(3) AS-3 — Tempered-laminated

(4) AS-14 — Glass/Plastic

(8) Other (specify):

(9) Unknown

Window Precrash Glazing Status

39. WS 1 40. LF 3 41. RF 2 42. LR 2 43. RR 2

44. BL 1 45. Roof 0 46. Other 0

(0) No glazing contact and no damage, or no glazing

(1) Fixed

(2) Closed

(3) Partially opened

(4) Fully opened

(9) Unknown

National Accident Sampling System-Crashworthiness Data System: Interior Vehicle Form

OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st 47. 1 3	48. 1 3	49. 6	50. 3
2nd 51. 1 3	52. 1 3	53. 6	54. 3
3rd 55. 1 3	56. 1 3	57. 6	58. 3
4th 59. 1 3	60. 1 3	61. 6	62. 3
5th 63. 1 3	64. 1 3	65. 6	66. 3
6th 67. 1 3	68. 1 3	69. 6	70. 3
7th 71. 1 3	72. 1 3	73. 6	74. 3
8th 75. 1 3	76. 1 3	77. 6	78. 3
9th 79. 1 3	80. 1 3	81. 6	82. 3
10th 83. 1 3	84. 1 3	85. 6	86. 3

LOCATION OF INTRUSION

Front Seat

- (11) Left
(12) Middle
(13) Right

Fourth Seat

- (41) Left
(42) Middle
(43) Right

Second Seat

- (21) Left
(22) Middle
(23) Right

- (97) Catastrophic
(98) Other enclosed area (specify)

(99) Unknown

Third Seat

- (31) Left
(32) Middle
(33) Right

INTRUDING COMPONENT

Interior Components

- (01) Steering assembly
(02) Instrument panel left
(03) Instrument panel center
(04) Instrument panel right
(05) Toe pan
(06) A-pillar
(07) B-pillar
(08) C-pillar
(09) Floor panel (floor)
(10) Floor panel (center)
(11) Floor panel (right)
(12) Windshield
(13) Windshield header
(14) Window frame
(15) Floor pan (includes sill)
(16) Backlight header
(17) Front seat back
(18) Second seat back
(19) Third seat back
(20) Fourth seat back
(21) Fifth seat back
(22) Seat cushion
(23) Back door/panel (e.g., tailgate)
(24) Other interior component (specify):
(25) Side panel - forward of the A-pillar
(26) Side panel - rear of the A-pillar

Exterior Components

- (30) Hood
(31) Outside surface of this vehicle (specify):
(32) Other exterior object in the environment (specify):
(33) Unknown exterior object
(97) Catastrophic
(98) Intrusion of unlisted component(s) (specify):
(99) Unknown

MAGNITUDE OF INTRUSION

- (1) ≥ 1 inch but < 3 inches
(2) ≥ 3 inches but < 6 inches
(3) ≥ 6 inches but < 12 inches
(4) ≥ 12 inches but < 18 inches
(5) ≥ 18 inches but < 24 inches
(6) ≥ 24 inches
(7) Catastrophic
(9) Unknown

DOMINANT CRUSH DIRECTION

- (1) Vertical
(2) Longitudinal
(3) Lateral
(7) Catastrophic
(9) Unknown

STEERING COLUMN

87. Steering Column Type

- (1) Fixed column
 (2) Tilt column
 (3) Telescoping column
 (4) Tilt and telescoping column
 (8) Other column type (specify):
 (9) Unknown

88. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-91 CDS.)

89. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-91 CDS.)

90. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-91 CDS.)

91. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-91 CDS.)

92. Steering Rim/Spoke Deformation

- (15) Code actual measured deformation to the nearest inch.
 (0) No steering rim deformation
 (1-5) Actual measured value
 (6) 6 inches or more
 (8) Observed deformation cannot be measured
 (9) Unknown

93. Location of Steering Rim/Spoke Deformation

- (00) No steering rim deformation

Quarter Sections

- (01) Section A
 (02) Section B
 (03) Section C
 (04) Section D



Half Sections

- (05) Upper half of rim/spoke
 (06) Lower half of rim/spoke
 (07) Left half of rim/spoke
 (08) Right half of rim/spoke



- (09) Complete steering wheel collapse
 (10) Undetermined location
 (99) Unknown

INSTRUMENT PANEL

94. Odometer Reading

027,000

26,919 miles—Code mileage to the nearest 1,000 miles

- (000) No odometer
 (001) Less than 1,500 miles
 (300) 299,500 miles or more
 (999) Unknown

Source: _____

95. Instrument Panel Damage from Occupant Contact?

- (0) No
 (1) Yes
 (9) Unknown

1

96. Knee Bolsters Deformed from Occupant Contact?

- (0) No
 (1) Yes
 (8) Not present
 (9) Unknown

0

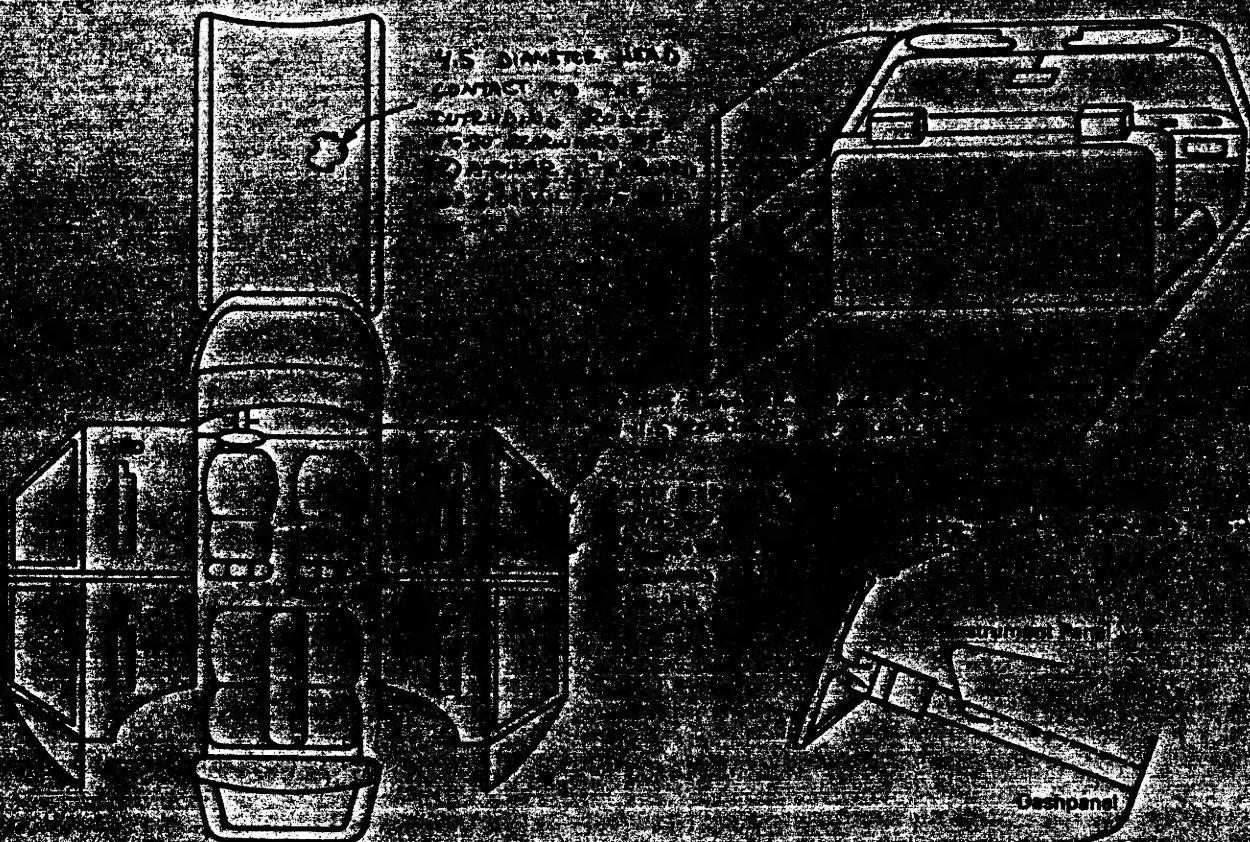
97. Did Glove Compartment Door Open During Collision(s)?

- (0) No
 (1) Yes
 (8) Not present
 (9) Unknown

1

VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure, Cross hatch contact points, draw spider webs or use other annotation as may be appropriate. Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	13	1	(1) KNEE	SCUFF	
B	13	1	LEG	SCUFF	
C	13	1	(1) KNEE	SCUFF w/ DISRUPTION OF FABRIC	
D	10	1	(1) LEG	SCUFF	
E	13	1	(1) LEG	BRACKETS DEFORMED	
F	53	1	(1) SHOULDER	SCUFF	
G	53	1	(1) ARM	TISSUE	
H	54	1	HEAD	DENT	
I					
J					
K					
L					
M					
N					

CODES FOR INTERIOR COMPONENTS

FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A-pillar, instrument panel, or mirror (passenger side only)
- (16) Other front object (specify):

LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A pillar
- (23) Left B pillar
- (24) Other left pillar (specify):
- (25) Left side window glass or frame

- (26) Left side window glass including one or more of the following: frame, window sill, A pillar, B pillar, or roof side rail.
- (27) Other left side object (specify):

RIGHT SIDE

- (28) Left side window sill
- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A pillar
- (33) Right B pillar
- (34) Other right pillar (specify):
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A pillar, B pillar, or roof side rail.
- (37) Other right side object (specify):
- (38) Right side window sill

INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify):
- (44) Head restraint system
- (45) Air bag
- (46) Other occupants (specify):
- (47) Interior loose objects

- (48) Child safety seat (specify):

- (49) Other interior object (specify):
POLICE RADIOS

ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

FLOOR

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify):

CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

AUTOMATIC RESTRAINTS

NOTES: Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

AIR BAGS

		Left	Right
E I R S T	Availability/Function		
	Deployment		
	Failure		

Air Bag System Availability/Function	Air Bag System Deployment	Air Bag System Failure
(0) Not equipped/not available	(0) Not equipped/not available	(0) Not equipped/not available
(1) Air bag	(1) Air bag deployed during accident	(1) Air bag deployed during accident
(2) Air bag disconnected (specify)	(2) Air bag deployed during accident	(2) Air bag deployed during accident
(3) Air bag not reinstalled	(3) Air bag deployed during accident	(3) Air bag deployed during accident
(9) Unknown	(4) Nondeployed	(4) Nondeployed
	(5) Air bag deployed during accident	(5) Air bag deployed during accident
	(6) Air bag deployed during accident	(6) Air bag deployed during accident
	(7) Air bag deployed during accident	(7) Air bag deployed during accident
	(8) Air bag deployed during accident	(8) Air bag deployed during accident
	(9) Unknown	(9) Unknown

AUTOMATIC BELTS

		Left	Right
E I R S T	Availability/Function		
	Use		
	Type		
	Proper Use		
	Failure Modes		

Automatic (Passive) Belt System Availability/Function	Proper Use of Automatic (Passive) Belt System	Automatic (Passive) Belt Failure Modes During Accident
(0) Not equipped/not available	(0) Not equipped/not available/not used	(0) Not equipped/not available/not in use
(1) 2 point automatic belts	(1) Automatic belt used properly	(1) No automatic belt failure(s)
(2) 3 point automatic belts	(2) Automatic belt used properly with child safety seat	(2) Torn webbing (stretched webbing not included)
(3) Automatic belts - type unknown		(3) Broken buckle or latchplate
Non-functional	Automatic Belt Used Improperly	(4) Upper anchorage separated
(4) Automatic belts destroyed or rendered inoperative	(3) Automatic shoulder belt worn under arm	(5) Other anchorage separated (specify):
(9) Unknown	(4) Automatic shoulder belt worn behind back	(6) Broken retractor
Automatic (Passive) Belt System Use	(5) Automatic belt worn around more than one person	(7) Combination of above (specify):
(0) Not equipped/not available/destroyed or rendered inoperative	(6) Lap portion of automatic belt worn on abdomen	(8) Other automatic belt failure (specify):
(1) Automatic belt in use	(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):	(9) Unknown
(2) Automatic belt not in use (manually disconnected, motorized track inoperative)		
(3) Automatic belt use unknown	(8) Other improper use of automatic belt system (specify):	
Automatic (Passive) Belt System Type	(9) Unknown	
(0) Not equipped/not available		
(1) Non-motorized system		
(2) Motorized system		
(9) Unknown		

MANUAL RESTRAINTS

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FRONT SEAT	Availability	4	3	4
	Use	01	-	-
	Failure Modes	1	-	-
MIDDLE SEAT	Availability	4	3	4
	Use	-	-	-
	Failure Modes	-	-	-
REAR SEAT	Availability	X		
	Use			
	Failure Modes			
OTHER SEAT	Availability	X		
	Use			
	Failure Modes			

Manual (Active) Belt System Availability

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available - type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): _____

(9) Unknown _____

Manual (Active) Belt System Use

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify): _____
- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used - type unknown

(08) Other belt used (specify): _____

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat - type unknown
- (18) Other belt used with child safety seat (specify): _____
- (99) Unknown if belt used

Manual (Active) Belt Failure Modes During Accident

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____
- (6) Broken retractor
- (7) Combination of above (specify): _____
- (8) Other manual belt failure (specify): _____
- (9) Unknown _____

CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number	NONE				
1. Type of Child Safety Seat					
2. Child Safety Seat Orientation					
3. Child Safety Seat Harness Usage					
4. Child Safety Seat Shield Usage					
5. Child Safety Seat Tether Usage					
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat				
<p>1. Type of Child Safety Seat</p> <p>(0) No child safety seat</p> <p>(1) Infant seat</p> <p>(2) Toddler seat</p> <p>(3) Convertible seat</p> <p>(4) Booster seat</p> <p>(7) Other type child safety seat (specify):</p> <p>(8) Unknown child safety seat type</p> <p>(9) Unknown if child safety seat used</p> <p>2. Child Safety Seat Orientation</p> <p>(00) No child safety seat</p> <p>Designed for Rear Facing for This Age/Weight</p> <p>(01) Rear facing</p> <p>(02) Forward facing</p> <p>(08) Other orientation (specify):</p> <p>(09) Unknown orientation</p> <p>Designed for Forward Facing for This Age/Weight</p> <p>(11) Rear facing</p> <p>(12) Forward facing</p> <p>(18) Other orientation (specify):</p> <p>(19) Unknown orientation</p> <p>Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight</p> <p>(21) Rear facing</p> <p>(22) Forward facing</p> <p>(28) Other orientation (specify):</p> <p>(29) Unknown orientation</p> <p>(99) Unknown if child safety seat used</p>					
<p>3. Child Safety Seat Harness Usage</p> <p>(00) No child safety seat</p> <p>Not Designed with Harness/Shield/Tether</p> <p>(01) After market harness/shield/tether added, not used</p> <p>(02) After market harness/shield/tether used</p> <p>(03) Child safety seat used, but no after market harness/shield/tether added</p> <p>(09) Unknown if harness/shield/tether added or used</p> <p>Designed With Harness/Shield/Tether</p> <p>(11) Harness/shield/tether not used</p> <p>(12) Harness/shield/tether used</p> <p>(19) Unknown if harness/shield/tether used</p> <p>Unknown If Designed With Harness/Shield/Tether</p> <p>(21) Harness/shield/tether not used</p> <p>(22) Harness/shield/tether used</p> <p>(29) Unknown if harness/shield/tether used</p> <p>(99) Unknown if child safety seat used</p>					
<p>4. Child Safety Seat Shield Usage</p> <p>(00) No child safety seat</p> <p>Not Designed with Harness/Shield/Tether</p> <p>(01) After market harness/shield/tether added, not used</p> <p>(02) After market harness/shield/tether used</p> <p>(03) Child safety seat used, but no after market harness/shield/tether added</p> <p>(09) Unknown if harness/shield/tether added or used</p> <p>Designed With Harness/Shield/Tether</p> <p>(11) Harness/shield/tether not used</p> <p>(12) Harness/shield/tether used</p> <p>(19) Unknown if harness/shield/tether used</p> <p>Unknown If Designed With Harness/Shield/Tether</p> <p>(21) Harness/shield/tether not used</p> <p>(22) Harness/shield/tether used</p> <p>(29) Unknown if harness/shield/tether used</p> <p>(99) Unknown if child safety seat used</p>					
<p>5. Child Safety Seat Tether Usage</p> <p>(00) No child safety seat</p> <p>Not Designed with Harness/Shield/Tether</p> <p>(01) After market harness/shield/tether added, not used</p> <p>(02) After market harness/shield/tether used</p> <p>(03) Child safety seat used, but no after market harness/shield/tether added</p> <p>(09) Unknown if harness/shield/tether added or used</p> <p>Designed With Harness/Shield/Tether</p> <p>(11) Harness/shield/tether not used</p> <p>(12) Harness/shield/tether used</p> <p>(19) Unknown if harness/shield/tether used</p> <p>Unknown If Designed With Harness/Shield/Tether</p> <p>(21) Harness/shield/tether not used</p> <p>(22) Harness/shield/tether used</p> <p>(29) Unknown if harness/shield/tether used</p> <p>(99) Unknown if child safety seat used</p>					
<p>6. Child Safety Seat Make/Model</p> <p>(Specify make/model and occupant number)</p>					

HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
FIRST	Head Restraint Type/Damage	3	-	4
	Seat Type	06	06	06
	Seat Performance	1	6	6
	Seat Orientation	1	1	1
SECOND	Head Restraint Type/Damage	0	0	0
	Seat Type	03	03	03
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
THIRD	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
OTHER	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			

Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral — no damage
- (2) Integral — damaged during accident
- (3) Adjustable — no damage
- (4) Adjustable — damaged during accident
- (5) Add-on — no damage
- (6) Add-on — damaged during accident
- (8) Other Specify: _____
- (9) Unknown

Seat Type (this Occupant Position)

- (00) No seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): _____
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

Seat Performance (this Occupant Position)

- (0) No seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed specify: _____
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): _____
- (7) Combination of above (specify): _____
- (8) Other (specify): _____
- (9) Unknown

Seat Orientation (this Occupant Position)

- (0) No seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): _____
- (9) Unknown

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

EJECTION/ENTRAPMENT DATA

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

EJECTION No ☐ Yes ☒

Describe indications of ejection and body parts involved in ejection:

Occupant Name:

Occupant Position:

Ejection Medium:

Medium Status:

Ejection

- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, Unknown degree
- (9) Unknown

Ejection Area

- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear

Ejection Area

- (7) Roof
- (8) Other area (e.g., back of pickup, etc.) (specify)
- (9) Unknown

Ejection Medium

- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify)

Ejection Medium

- (5) Integral structure
- (8) Other medium (specify)
- (9) Unknown

Medium Status Immediately Prior to Impact

- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

ENTRAPMENT No ☒ Yes ☐

Describe entrapment mechanism:

Component(s):

(Note in vehicle interior diagram)

APPENDIX D

NASS Occupant Forms



OCCUPANT ASSESSMENT FORM

1. ~~Primary Sampling Unit Number~~ _____

2. Case Number - ~~Stratum~~ 92-12

3. Vehicle Number 01

4. Occupant Number 01

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 54
Code actual age at time of accident.
(00) Less than one year old (specify by month):

(97) 97 years and older
(99) Unknown

6. Occupant's Sex 1

(1) Male
(2) Female
(9) Unknown

7. Occupant's Height 70.5"
Code actual height to the nearest inch.
(99) Unknown

8. Occupant's Weight 220 lbs. 220
Code actual weight to the nearest pounds.
(999) Unknown

9. Occupant's Role 1

(1) Driver
(2) Passenger
(9) Unknown

10. Occupant's Seat Position 11

Front Seat
(11) Left side
(12) Middle
(13) Right side
(14) Other (specify):
(15) On or in the lap of another occupant

Second Seat
(21) Left side
(22) Middle
(23) Right side
(24) Other (specify):
(25) On or in the lap of another occupant

Third Seat
(31) Left side
(32) Middle
(33) Right side
(34) Other (specify):
(35) On or in the lap of another occupant

Fourth Seat
(41) Left side
(42) Middle
(43) Right side
(44) Other (specify):
(45) On or in the lap of another occupant

(97) In or on unenclosed area
(98) Other seat (specify):
(99) Unknown

11. Occupant Posture 0

(0) Normal posture
(1) Abnormal posture (specify):

(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection 0

(0) No ejection
(1) Complete ejection
(2) Partial ejection
(3) Ejection, unknown degree
(9) Unknown

13. Ejection Area 0

(0) No ejection
(1) Windshield
(2) Left front
(3) Right front
(4) Left rear
(5) Right rear
(6) Rear
(7) Roof
(8) Other area (e.g., back of pickup, etc.)
(specify):
(9) Unknown

14. Ejection Medium 0

(0) No ejection
(1) Door/hatch/tailgate
(2) Nonfixed roof structure
(3) Fixed glazing
(4) Nonfixed glazing (specify):
(5) Integral structure
(8) Other medium (specify):
(9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

(0) No ejection
(1) Open
(2) Closed
(3) Integral structure
(9) Unknown

16. Entrapment 0

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

(0) Not entrapped
(1) Entrapped
(9) Unknown

RESTRAINT SYSTEM AND SEAT EVALUATION**17. Manual (Active) Belt System Availability**4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): _____

(9) Unknown _____

18. Manual (Active) Belt System Use04

(00) None used, not available, or belt removed/destroyed

(01) Inoperative (specify): _____

(02) Shoulder belt _____

(03) Lap belt _____

(04) Lap and shoulder belt _____

(05) Belt used—type unknown _____

(08) Other belt used (specify): _____

(12) Shoulder belt used with child safety seat _____

(13) Lap belt used with child safety seat _____

(14) Lap and shoulder belt used with child safety seat _____

(15) Belt used with child safety seat—type unknown _____

(18) Other belt used with child safety seat (specify): _____

(99) Unknown if belt used _____

19. Proper Use of Manual (Active) Belts1

(0) None used or not available

(1) Belt used properly

(2) Belt used properly with child safety seat

Belt Used Improperly

(3) Shoulder belt worn under arm

(4) Shoulder belt worn behind back or seat

(5) Belt worn around more than one person

(6) Lap belt worn on abdomen

(7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of manual belt system (specify): _____

(9) Unknown _____

20. Manual (Active) Belt Failure Modes During Accident1

(0) No manual belt used

(1) No manual belt failure(s)

(2) Torn webbing (stretched webbing not included)

(3) Broken buckle or latchplate

(4) Upper anchorage separated

(5) Other anchorage separated (specify): _____

(6) Broken retractor _____

(7) Combination of above (specify): _____

(8) Other manual belt failure (specify): _____

(9) Unknown _____

21. Air Bag System Availability/Function1

(0) Not equipped/not available

(1) Air bag

Non-functional

(2) Air bag disconnected (specify): _____

(3) Air bag not reinstalled _____

(9) Unknown _____

22. Air Bag System Deployment1

(0) Not equipped/not available

(1) Air bag deployed during accident (as a result of impact)

(2) Air bag deployed inadvertently just prior to accident

(3) Air bag deployed, accident sequence undetermined

(4) Nondeployed

(5) Unknown if deployed

(6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)

(9) Unknown _____

23. Did Air Bag System Fail?1

(0) Not equipped/not available

(1) No

(2) Yes (specify): _____

(9) Unknown _____

Note: See Variables 44 through 48 (Page 5) for information on Automatic Belts

24. Police Reported Restraint Use4

(0) None used

(1) Police did not indicate restraint use

(2) Shoulder belt

(3) Lap belt

(4) Lap and shoulder belt

(5) Belt used, type not specified

(6) Child safety seat

(7) Other or automatic restraint (specify): _____

(8) Restrained, type unknown _____

(9) Police indicated "unknown" _____

25. Head Restraint Type/Damage by Occupant at This Occupant Position3

(0) No head restraints

(1) Integral—no damage

(2) Integral—damaged during accident

(3) Adjustable—no damage

(4) Adjustable—damaged during accident

(5) Add-on—no damage

(6) Add-on—damaged during accident

(8) Other (specify): _____

(9) Unknown _____

26. Seat Type (this Occupant Position) 0 6
 (00) Occupant not seated or no seat
 (01) Bucket
 (02) Bucket with folding back
 (03) Bench
 (04) Bench with separate back cushions
 (05) Bench with folding back(s)
 (06) Split bench with separate back cushions
 (07) Split bench with folding back(s) *POWER*
 (08) Pedestal (i.e., column supported)
 (09) Other seat type (specify):
 (10) Box mounted seat (i.e., van type)
 (99) Unknown
27. Seat Performance (this Occupant Position) 1
 (0) Occupant not seated or no seat
 (1) No seat performance failure(s)
 (2) Seat adjusters failed
 (3) Seat back folding locks or "seat back" failed
 (4) Seat track/anchors failed
 (5) Deformed by impact of occupant
 (6) Deformed by passenger compartment intrusion (specify):

 (7) Combination of above (specify):

 (8) Other (specify):

 (9) Unknown

CHILD SAFETY SEAT

28. Child Safety Seat Make/Model 0 0 0
 (000) No child safety seat
 Applicable codes are found in your NASS CDS Data Collection, Coding and Editing
 (950) Built-in child safety seat
 (997) Other make/model (specify):

 (998) Unknown make/model
 (999) Unknown if child safety seat used
29. Type of Child Safety Seat 0
 (0) No child safety seat
 (1) Infant seat
 (2) Toddler seat
 (3) Convertible seat
 (4) Booster seat
 (7) Other type child safety seat (specify):

 (8) Unknown child safety seat type
 (9) Unknown if child safety seat used

30. Child Safety Seat Orientation 0 0
 (00) No child safety seat
Designed for Rear Facing for This Age/Weight
 (01) Rear facing
 (02) Forward facing
 (08) Other orientation (specify):

 (09) Unknown orientation
Designed For Forward Facing for This Age/Weight
 (11) Rear facing
 (12) Forward facing
 (18) Other orientation (specify):

 (19) Unknown orientation
Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight
 (21) Rear facing
 (22) Forward facing
 (28) Other orientation (specify):

 (29) Unknown orientation
 (99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage 0 0
 32. Child Safety Seat Shield Usage 0 0
 33. Child Safety Seat Tether Usage 0 0
 Note: Options below applicable to Variables OA31-OA33.
 (00) No child safety seat

Not Designed With Harness/Shield/Tether
 (01) After market harness/shield/tether added, not used
 (02) After market harness/shield/tether used
 (03) Child safety seat used, but no after market harness/shield/tether added
 (09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether
 (11) Harness/shield/tether not used
 (12) Harness/shield/tether used
 (19) Unknown if harness/shield/tether used
Unknown If Designed With Harness/Shield/Tether
 (21) Harness/shield/tether not used
 (22) Harness/shield/tether used
 (29) Unknown if harness/shield/tether used
 (99) Unknown if child safety seat used

INJURY CONSEQUENCES**34. Injury Severity (Police Rating)**3

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment - Mortality3

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease

Nonfatal

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify): _____

(9) Unknown

36. Type Of Medical Facility (for Initial Treatment) 1

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify): _____

(9) Unknown

37. Hospital Stay23

- (00) Not Hospitalized
- _____ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

38. Working Days Lost61

- _____ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

39. Time to Death00

- _____ Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
- (96) Fatal - ruled disease
- (99) Unknown

40. 1st Medically Reported Cause of Death 00**41. 2nd Medically Reported Cause of Death** 00**42. 3rd Medically Reported Cause of Death** 00

- _____ Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
- (97) Other result (specify): _____

(99) Unknown

43. Number of Recorded Injuries for This Occupant14

- _____ Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
- (97) Injured, details unknown
- (99) Unknown if injured

AUTOMATIC BELT SYSTEM**44. Automatic (Passive) Belt System Availability/Function** 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

45. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): _____
- (3) Automatic belt use unknown
- (9) Unknown

46. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

47. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____

- (8) Other improper use of automatic belt system (specify): _____
- (9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____
- (6) Broken retractor
- (7) Combination of above (specify): _____
- (8) Other automatic belt failure (specify): _____
- (9) Unknown

49. Seat Orientation (this Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): _____
- (9) Unknown

TRAUMA DATA**50. Glasgow Coma Scale (GCS) Score (at Medical Facility)** 02

- (00) Not injured
- (01) Injured - not treated at medical facility
- (02) No GCS Score at medical facility
- (03-15) Code the actual value of the initial GCS Score recorded at medical facility.
- (97) Injured, details unknown
- (99) Unknown if injured

51. Was the Occupant Given Blood? 9

- (1) No - blood not given
- (2) Yes - blood given (specify units): _____
- (9) Unknown if blood given

52. Arterial Blood Gases (ABG) - HCO₃ 01

- (00) Not injured
- (01) Injured, ABGs not measured or reported
- (02-50) Code the actual value of the HCO₃
- (96) ABGs reported, HCO₃ unknown
- (97) Injured, details unknown
- (99) Unknown if injured

UPDATE CANDIDATE? NO [☒] YES []OCCUPANT INJURY FORM INCLUDED WITH INITIAL SUBMISSION? NO [☒] YES []

*** STOP HERE ***
 IF THERE ARE NO RECORDED INJURIES
 (I.E., OA43 = 00,97,99)



OCCUPANT INJURY FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

4. Occupant Number

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	O.I.C.-A.I.S				Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion No.	
		Body Region	Aspect	Lesion	System Organ					A.I.S. Severity
1st	5. <u>2</u>	6. <u>C</u>	7. <u>R</u>	8. <u>F</u>	9. <u>S</u>	10. <u>4</u>	11. <u>33</u>	12. <u>1</u>	13. <u>1</u>	14. <u>03/04</u>
2nd	15. <u>2</u>	16. <u>C</u>	17. <u>R</u>	18. <u>C</u>	19. <u>P</u>	20. <u>3</u>	21. <u>33</u>	22. <u>1</u>	23. <u>1</u>	24. <u>03/04</u>
3rd	25. <u>2</u>	26. <u>W</u>	27. <u>L</u>	28. <u>B</u>	29. <u>I</u>	30. <u>1</u>	31. <u>45</u>	32. <u>1</u>	33. <u>1</u>	34. <u>00</u>
4th	35. <u>2</u>	36. <u>H</u>	37. <u>W</u>	38. <u>K</u>	39. <u>B</u>	40. <u>2</u>	41. <u>54</u>	42. <u>1</u>	43. <u>1</u>	44. <u>01</u>
5th	45. <u>2</u>	46. <u>F</u>	47. <u>B</u>	48. <u>F</u>	49. <u>S</u>	50. <u>2</u>	51. <u>54</u>	52. <u>1</u>	53. <u>1</u>	54. <u>01</u>
6th	55. <u>2</u>	56. <u>R</u>	57. <u>R</u>	58. <u>F</u>	59. <u>S</u>	60. <u>2</u>	61. <u>53</u>	62. <u>1</u>	63. <u>1</u>	64. <u>01</u>
7th	65. <u>2</u>	66. <u>B</u>	67. <u>S</u>	68. <u>F</u>	69. <u>S</u>	70. <u>2</u>	71. <u>40/20</u>	72. <u>1</u>	73. <u>1</u>	74. <u>00</u>
8th	75. <u>2</u>	76. <u>F</u>	77. <u>C</u>	78. <u>F</u>	79. <u>S</u>	80. <u>2</u>	81. <u>54</u>	82. <u>1</u>	83. <u>1</u>	84. <u>01</u>
9th	85. <u>2</u>	86. <u>S</u>	87. <u>R</u>	88. <u>F</u>	89. <u>S</u>	90. <u>2</u>	91. <u>53</u>	92. <u>1</u>	93. <u>1</u>	94. <u>02</u>
10th	95. <u>2</u>	96. <u>R</u>	97. <u>R</u>	98. <u>F</u>	99. <u>S</u>	100. <u>3</u>	101. <u>53</u>	102. <u>1</u>	103. <u>1</u>	104. <u>02</u>

OCCUPANT INJURY DATA

	Source of Injury Data	O.I.C.-A.I.S					Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion No.
		Body Region	Aspect	Lesion	System Organ	A.I.S. Severity				
11th	<u>2</u>	<u>F</u>	<u>C</u>	<u>L</u>	<u>I</u>	<u>1</u>	<u>54</u>	<u>1</u>	<u>1</u>	<u>01</u>
12th	<u>2</u>	<u>H</u>	<u>R</u>	<u>L</u>	<u>E</u>	<u>1</u>	<u>54</u>	<u>1</u>	<u>1</u>	<u>01</u>
13th	<u>2</u>	<u>H</u>	<u>S</u>	<u>L</u>	<u>I</u>	<u>1</u>	<u>54</u>	<u>1</u>	<u>1</u>	<u>01</u>
14th	<u>2</u>	<u>F</u>	<u>I</u>	<u>D</u>	<u>S</u>	<u>1</u>	<u>54</u>	<u>1</u>	<u>1</u>	<u>01</u>
15th	—	—	—	—	—	—	—	—	—	—
16th	—	—	—	—	—	—	—	—	—	—
17th	—	—	—	—	—	—	—	—	—	—
18th	—	—	—	—	—	—	—	—	—	—
19th	—	—	—	—	—	—	—	—	—	—
20th	—	—	—	—	—	—	—	—	—	—
21st	—	—	—	—	—	—	—	—	—	—
22nd	—	—	—	—	—	—	—	—	—	—
23rd	—	—	—	—	—	—	—	—	—	—
24th	—	—	—	—	—	—	—	—	—	—
25th	—	—	—	—	—	—	—	—	—	—

AGE 54
SEX MALE
WT. 99KG (220 lbs)
HT. 179.1cm (70.5")

Right earlobe laceration
(AIS-1), intruding roof

Superior scalp laceration
(AIS-1), intruding roof

Closed head injury with
brief loss of consciousness
and residual cognitive deficits
(AIS-2), roof

Dislocated teeth, #D5-8
(AIS-1), intruding roof

Displaced nasal fracture (AIS-2),
intruding roof

Non-displaced fracture of the
right zygoma (AIS-2),
intruding roof

Nasal laceration (AIS-1),
intruding roof

Right clavicle fracture
(AIS-2), intruding
right roof side rail

Fractured right ribs 2-9
with flail chest and
right hemothorax
(AIS-4), right B-pillar

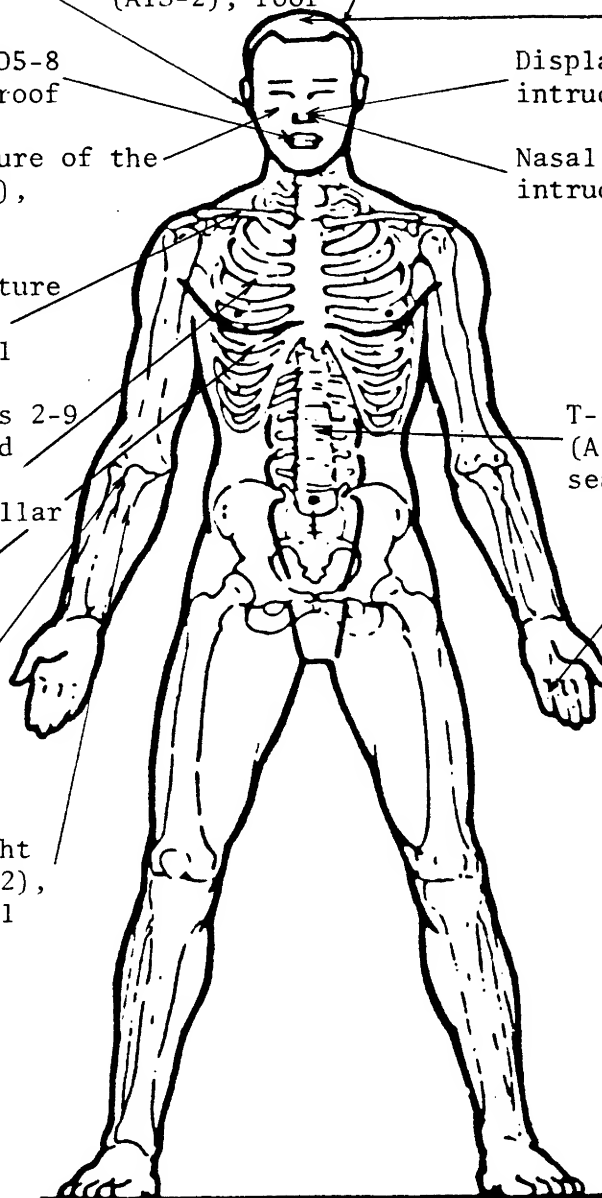
T-12 spinous process fracture
(AIS-2), rebound contact into
seatback/door

Right pulmonary
contusion (AIS-3),
right B-pillar

Full thickness thermal burn
of the dorsal left middle,
ring and fifth fingers
(AIS-1) air bag inflator
module

Comminuted fracture
of the right radial
head (AIS-3), right
roof side rail

Fracture of the right
proximal ulna (AIS-2),
right roof side rail



SOURCE OF INJURY DATA**OFFICIAL**

- (1) Autopsy records with or without hospital medical records
- (2) Hospital medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): _____
- (9) Police

INJURY SOURCE**FRONT**

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A-pillar, instrument panel, or mirror (passenger side only)
- (16) Other front object (specify): _____

LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A pillar
- (23) Left B pillar
- (24) Other left pillar (specify): _____
- (25) Left side window glass or frame

- (26) Left side window glass including one or more of the following: frame, window sill, A-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify): _____

- (28) Left side window sill

RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A pillar
- (33) Right B pillar
- (34) Other right pillar (specify): _____

- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A pillar, B pillar, or roof side rail.
- (37) Other right side object (specify): _____

- (38) Right side window sill

INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify): _____
- (44) Head restraint system
- (45) Air bag
- (46) Other occupants (specify): _____
- (47) Interior loose objects
- (48) Child safety seat (specify): _____
- (49) Other interior object (specify): _____

ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

FLOOR

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

REAR

- (60) Backlight (rear window)

- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): _____

EXTERIOR of OCCUPANT'S VEHICLE

- (65) Hood
- (66) Outside hardware (e.g., outside mirror, antenna)
- (67) Other exterior surface or tires (specify): _____
- (68) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (70) Front bumper
- (71) Hood edge
- (72) Other front of vehicle (specify): _____

- (73) Hood
- (74) Hood ornament
- (75) Windshield, roof rail, A-pillar
- (76) Side surface
- (77) Side mirrors
- (78) Other side protrusions (specify): _____

- (79) Rear surface
- (80) Undercarriage
- (81) Tires and wheels
- (82) Other exterior of other motor vehicle (specify): _____
- (83) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (84) Ground
- (85) Other vehicle or object (specify): _____
- (86) Unknown vehicle or object

NONCONTACT INJURY

- (90) Fire in vehicle
- (91) Flying glass
- (92) Other noncontact injury source (specify): _____
- (93) Air bag exhaust gases
- (97) Injured, unknown source

INJURY SOURCE CONFIDENCE LEVEL

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

DIRECT/INDIRECT INJURY

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

OCCUPANT INJURY CLASSIFICATION**O.I.C. Body Region**

- (M) Abdomen
- (Q) Ankle-foot
- (A) Arm (upper)
- (B) Back-thoracolumbar spine
- (C) Chest
- (E) Elbow
- (F) Face
- (R) Forearm
- (H) Head-skull
- (U) Injured, unknown region
- (K) Knee
- (L) Leg (lower)
- (Y) Lower limb(s) (whole or unknown part)
- (N) Neck-cervical spine
- (P) Pelvic-hip
- (S) Shoulder
- (T) Thigh
- (X) Upper limb(s) (whole or unknown part)
- (O) Whole body
- (W) Wrist-hand

Aspect of Injury

- (A) Anterior-front
- (B) Bilateral (rib fracture only)
- (C) Central
- (I) Inferior-lower
- (U) Injured, unknown aspect
- (L) Left
- (P) Posterior-back
- (R) Right
- (S) Superior-upper
- (W) Whole region

Lesion

- (A) Abrasion
- (M) Amputation
- (V) Avulsion
- (B) Burn
- (K) Concussion
- (C) Contusion
- (N) Crush
- (G) Detachment, separation
- (D) Dislocation

- (F) Fracture
- (Z) Fracture and dislocation
- (U) Injured, unknown lesion
- (L) Laceration
- (O) Other
- (P) Perforation, puncture
- (R) Rupture
- (S) Sprain
- (T) Strain
- (E) Total severance, transection

System/Organ

- (W) All systems in region
- (A) Arteries-veins
- (B) Brain
- (D) Digestive
- (E) Ears
- (O) Eye
- (H) Heart
- (U) Injured, unknown system
- (I) Integumentary
- (J) Joints
- (K) Kidneys

- (L) Liver
- (M) Muscles
- (N) Nervous system
- (P) Pulmonary-lungs
- (R) Respiratory
- (S) Skeletal
- (C) Spinal cord
- (Q) Spleen
- (T) Thyroid, other endocrine gland
- (V) Vertebrae

Abbreviated Injury Scale

- (1) Minor injury
- (2) Moderate injury
- (3) Serious injury
- (4) Severe injury
- (5) Critical injury
- (6) Maximum (untreatable)
- (7) Injured, unknown severity